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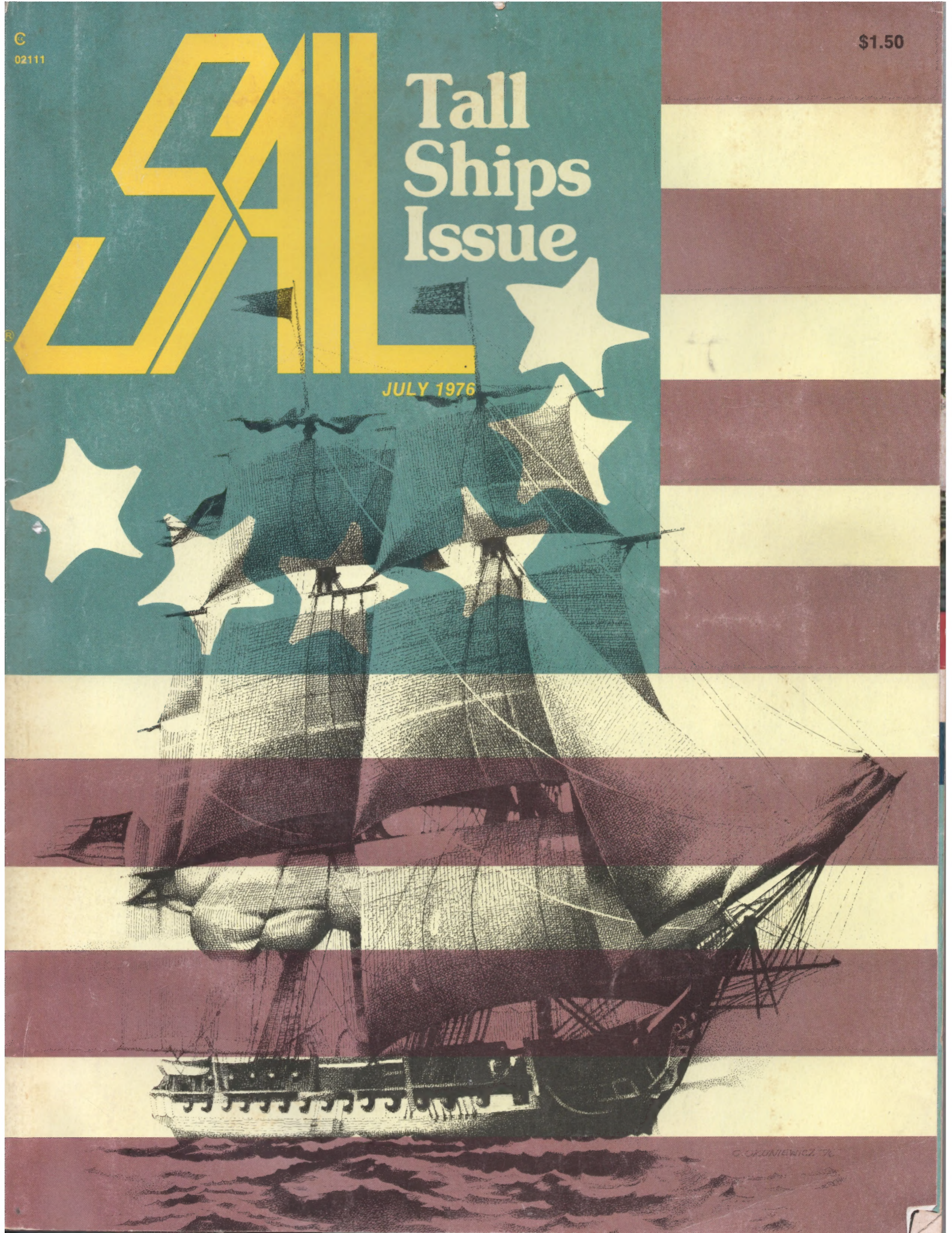
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# SAIL

## Tall Ships Issue

JULY 1976



C. W. DUNN, 74





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# Contents

July 1976

	<b>5</b>	<b>Editorial</b>
	<b>6</b>	<b>Readers Write</b>
		<b>Viewpoint</b>
Fred Miller	<b>14</b>	Recall for a Heavyweight
		<b>TECHNIQUES</b>
		<b>Class Boats</b>
Sam Altreuter	<b>21</b>	Downwind Tactics
		<b>Ocean Cruising</b>
William V. Kielhorn	<b>31</b>	Taking the End of a Towline
		<b>Ocean Racing</b>
Roger Marshall	<b>40</b>	When a New Crew Is Aboard
		<b>Navigation</b>
John Mellor	<b>46</b>	Keeping a Log
		<b>Sail Trim</b>
Mike Saunders	<b>53</b>	Steer by Sails
		<b>Weather</b>
Colleen Leary	<b>61</b>	Sea Breezes
		<b>FEATURES</b>
Spranger and Rosenfeld	<b>66</b>	<b>Tall Ships . . . a scene from the past . . . a spectacle of the present</b>
		<b>A Parade of Tall Ships</b>
Staff	<b>73</b>	<b>Sail Training . . . youngsters go to sea to find the world</b>
Patience Wales	<b>76</b>	<b>Readying for Sea . . . at one with history</b>
George Nichols	<b>84</b>	<b>Sail Training Associations Across the Sea— the history . . . the people . . .</b>
Bill Beavis	<b>88</b>	<b>Clearwater clear water</b>
Charles Mason	<b>90</b>	<b>Yacht Deliveries . . . you get what you pay for</b>
Lin and Larry Pardey	<b>96</b>	<b>Here Comes Kingston! Olympics 1976</b>
Ross, Knights and Mason	<b>99</b>	<b>Tradition Reborn . . . workboats of the past become pleasure craft of today</b>
William A. Baker	<b>106</b>	<b>Keelbolts and Sailplans</b>
	<b>110</b>	<i>Time of Wonder</i>
		<b>TECHNICAL</b>
Donald M. Street	<b>113</b>	Reconsidering the Yawl Rig
Bruce Bingham	<b>120</b>	Sailor's Sketchbook
Dick Cumiskey	<b>122</b>	Finding and Fixing Deck Leaks
Bill Beavis	<b>126</b>	Rope Fenders
		<b>SIDE FEATURES</b>
Dave Palmer	<b>128</b>	<b>OSTAR: the Vital Choice . . . north or south . . . two different races for singlehanders</b>
		<b>The English Coble</b>
Francis Poole	<b>132</b>	<b>The Dovekie</b>
Edith Blake	<b>135</b>	<b>Just Launched</b>
Jeff Spranger	<b>138</b>	<b>Gear and Equipment</b>
Gail E. Anderson	<b>140</b>	<b>Ahead and Astern</b>
Staff	<b>143</b>	<i>Trimaran Gulf Streamer capsizes</i>
	<b>149</b>	<b>Major Sailing Events</b>
	<b>150</b>	<b>Book Reviews</b>



The Third Maryland Regiment flew a 13-star, 13-stripe US flag, January 17, 1781 at the Battle of Cowpens, South Carolina. A pen-and-ink drawing of the *Constitution* by Chester E. Okuniewicz overlays this slice of history as the oldest commissioned US ship salutes our first 200 years



Stanley Rosenfeld and Jeff Spranger open the door to our Tall Ships special section that takes you from Plymouth, England, to New York Harbor and leaves you sailing through the past . . . p. 66



*Clearwater . . . a work boat carrying essential cargo—a message that must reach its destination . . . p. 90*



Knights, Ross and Mason kick off Kingston. Tune in to this Olympic preview from around the world . . . p. 99

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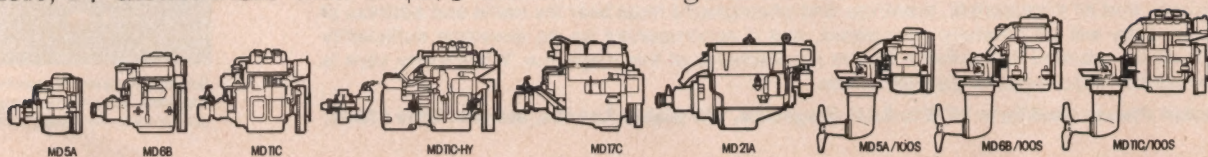
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## Editorial

### Saluting the Bicentennial

Perhaps the most appealing part of the American Bicentennial is the infinite variety that the celebration of this 200th anniversary of the nation is taking. And it is fitting that the most spectacular scenario in a long summer of bicentennial salutes should be the parade of sail in New York Harbor on Independence Day.

With 17 of the world's largest sailing ships passing in review up the Hudson River, leading hundreds of smaller sailing craft representing a wide slice of sailing history, Operation Sail 76 will be an unforgettable celebration.

Sail played an essential part in discovering this country, in populating it and in bringing to it its commercial success, so it is appropriate that sail should play the major role in this anniversary commemoration.

Pessimists have labelled this the last time that we'll see a sail flotilla of such grandeur and magnitude in this country. They forget that a significant proportion of the visiting fleet consists of older vessels that have been restored and of newer ships that sprang into being because of the unique advantages of sail training.

Wouldn't it be better to see this as the beginning of a new era in the United States? Of sail training ships and specialized sail cargo vessels permitted by enlightened federal legislation. The beginnings can be small but it is an idea that deserves to be nurtured.

Sail and sailors have the spirit to survive, if they are not strangled by bureaucracy.





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## READERS WRITE

### GREAT CIRCLE MANEUVERS

Bravo for Peter Rogers! He has provided SAIL readers with a simple and accurate device for settling arguments about great circle distances between ports ("Great Circle Distance by Maneuvering Board," SAIL, April 1976). At the risk of further fueling the methodology controversy, I plugged two of Mr. Rogers' examples into a Hewlett Packard-65 computer programmed for computation of great circle distances. The results, though close, varied both from the tabulated distances and from the maneuvering board distances reported by Rogers. In part, the discrepancies result from small differences in geographic coordinates used for the computations. Mine were taken from Bowditch, Appendix S. According to my HP-65 the great circle distances are as follows:

New York	to	Cape of Good Hope	6798.88 miles
40°42'N 74°01'W		34°21'S 18°29'E	

San Francisco	to	Singapore	7329.43 miles
37°49'N 122°25'W		1°17'N 103°51'E	

Using Rogers' coordinates for the Cape of Good Hope (34°22'S 18°23'E), the HP-65 comes up with 6793.36 miles, or just 4.64 miles less than the figure obtained with the maneuvering board—quite a showing for a 10-inch circle!

As a bonus for those actually wishing to set off on the great circle routes from New York to the Cape or from San Francisco to Singapore, the HP-65 computes the initial true headings as 116.11° and 301.43° respectively. Good luck, and don't forget to take along your maneuvering board!

William H. Trayfors  
Kathmandu, Nepal

### CREDIT WHERE CREDIT IS DUE

On the day I returned from the beautiful Central American country of Belize (formerly British Honduras) aboard the Oceanic Society chartered yacht *Tane*, I received in the mail the April, 1976 SAIL. I read with keen interest Jane and Nelson McClary's article, "Cruising to Another Way of Life... British Honduras" and noted the excellent style and overall accuracy.

I would take issue, however, with two points. Not once does the author indicate the name of British Honduras has been formally changed to Belize. Secondly, although the author dwells on the purported pollution of Belize City Harbor, those waters are actually cleaner than most city harbors in the world. The reference could possibly leave the reader with the impression that the overall quality of Belizian waters is poor. This is unfortunate, because the beautiful waters of Belize rival any in the world.

Barry P. Clark  
Livingston, NJ

### McCLARY REPLIES

In checking with the British Embassy in Washington, I learned that the country formerly called British Honduras is in transition between being a British possession and being independent. I gathered the British still call it British Honduras, and the natives now call it Belize.





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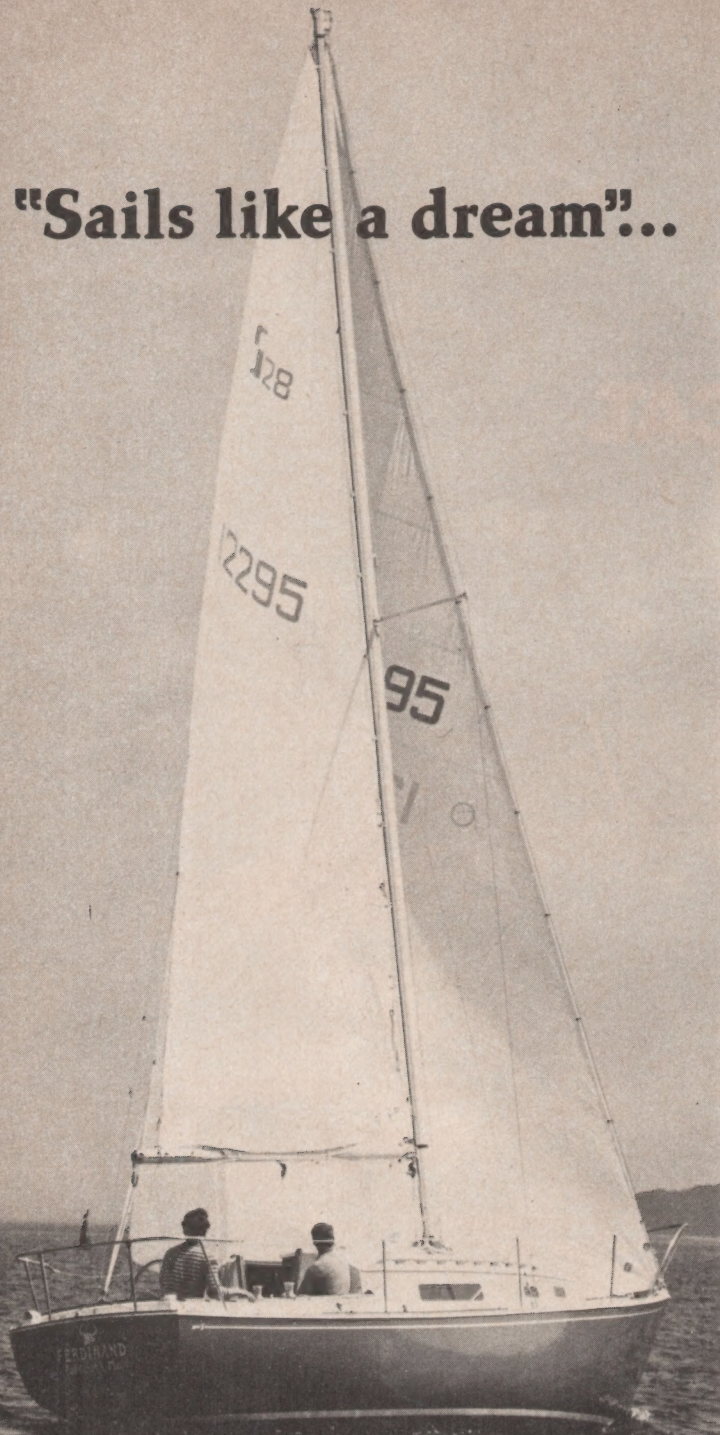
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# Sabre

The new name for the capital is Belmopan. I used British Honduras in my article because that is the name most people recognize.

As for the waters, those around the cities are putrid. True, the waters along the reef and the little-visited islands are beautiful beyond belief.

Jane McIlvaine McClary  
Middleburg, Va.

### GOLD-PLATED MAGNETS

I have been using a mini handbearing compass with very satisfactory results for the past five years. However, while on a cruise to Denmark from England this summer my fixes using the compass became very inaccurate. I attributed my problems to having spent the past winter on a ship where I had the luxury of gyro repeaters for taking bearings.

Early on in my investigation I had checked the area of deck on which I usually stand when doing navigational work and found nothing magnetic except a slightly magnetic belaying pin on the mizzenmast. The hull, superstructure, and spars are aluminum as are most of the fittings.

I then blamed the compass because every time I looked into it, the card would still be swinging.

Finally, I got an inspiration and held the frame of my new, gold-frame eyeglasses next to the steering compass. My glasses, which I wear all the time, were magnetized and deviated the steering compass by 25 degrees and the handbearing compass by 35 degrees!

Potentially, this could be a serious problem for all users of handbearing compasses of the mini type. As the compass is held right near the eye and because a nearsighted sailor is going to have to use glasses at the same time if he is to see the object of which he is taking a bearing, the possibility of magnetic eyeglasses must be considered and checked. Hearing aids could also cause this kind of problem.

I think that SAIL readers should know about this because hundreds of them could be wearing gold-plated magnets.

Daniel A. Pyzel  
Yarmouth, England

### GOING ASTRAY

Tut, tut! A beer-can holder on a compass pedestal ("Sailor's Sketchbook," SAIL, February 1976)? It may be that in the United States all beer cans are made out of non-magnetic metal. However, I came on deck once to find my helmsman daydreaming and following a compass 12 degrees in error because of a beer can, which I quickly confiscated. It was a rather expensive price to pay for a silly mistake.

Pierre Guy Charbonneau  
Montreal, PQ, Canada

*The first thing, of course, is to determine whether it is the can or the contents which accounts for course deviation! We would hope that most sailors know enough not to put any steel object near a compass. —Ed.*

### A BIT OF HISTORY

I was happy to read in the "Ahead and Astern" section (SAIL, February 1976) that Don Street's yawl *lolaire* had returned to the land of her birth and again had raced over waters familiar to her in her youth. However, it seemed strange that the article mentioned *lolaire*'s being laid up next to *Jolie Brise*, but that the report omitted that *lolaire*'s most famous owner was, indeed, Bobby Somerset.

Bobby, before his untimely death in the Aegean aboard his yacht *Trenchemer* a few years ago, was perhaps one of the finest sailors of his day, in ocean racing as well as in deep water cruising. Aboard *lolaire* he sailed many thousands of miles transatlantic and in European and Mediterranean waters, only parting with her to buy a larger vessel.

After a brief ownership in other hands, *lolaire* passed to Bob Crytser, long-time friend of Bobby Somerset, who employed her as part of his charter fleet in the West Indies before she was acquired by her present owner, Don Street.



# C&C 24

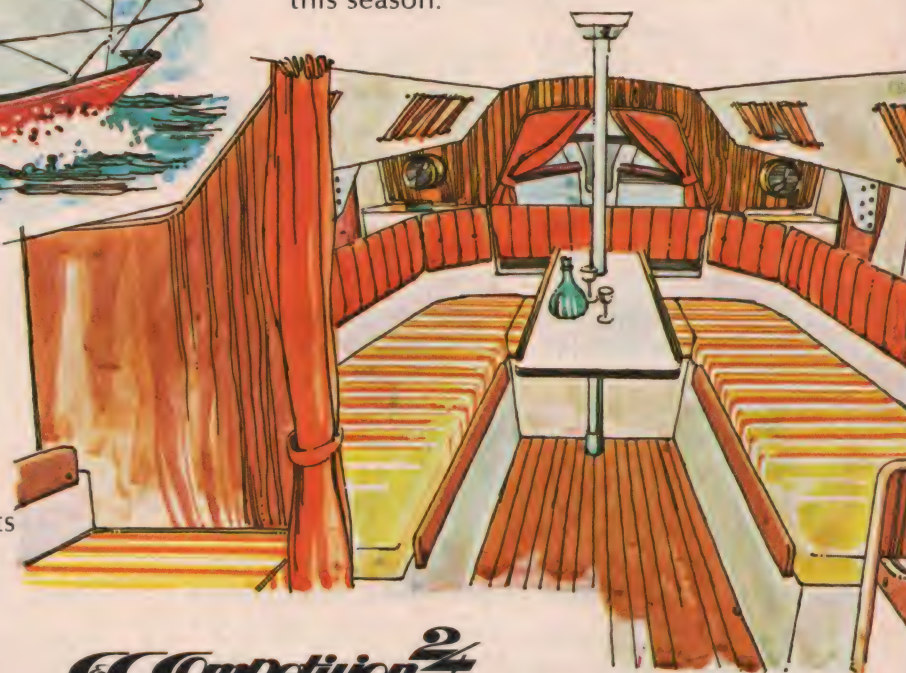
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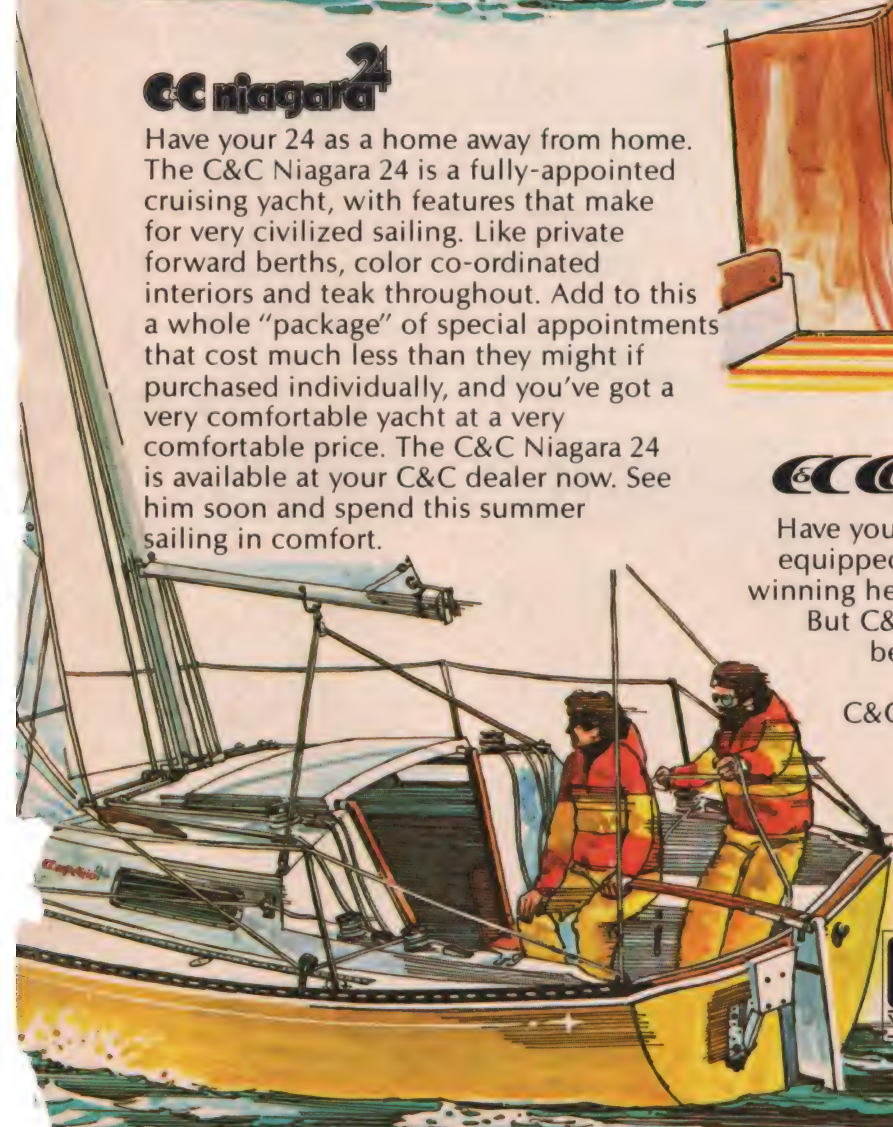
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As one who sailed many hundreds of miles aboard *lolaire* with Bobby Somerset, I feel that her years with one of the greatest sailors the yachting scene has produced should not go unnoticed.

Janet Sanso  
Oxnard, Calif.

## STREET REPLIES

Agreed, Bobby Somerset did own *lolaire* and did do some magnificent sailing in her. Bobby owned her from 1946-1953, crossed the Atlantic in her four times, and won the RORC points championship with her when she was 48 years old. Undoubtedly, the information about Somerset was omitted in SAIL because of space requirements.

*lolaire's* history will be more thoroughly documented at some future time, as my publishers have asked me to write a book, *lolaire and I*, basically the history of the boat combined with my 20 years of adventures and misadventures in the Caribbean.

Donald M. Street, Jr.  
St. Georges, Grenada, WI

## VOYAGING IN TIME

I enjoyed reading Carol Hogan's Viewpoint article, "You Shoulda' Been Here Five Years Ago" (SAIL, April 1976), but one point should be cleared up. Captain James Cook did not do any voyaging in the 1800s, not in this world, anyway. Captain Cook was done in by the natives of Kealahakua Bay on the island of Hawaii in 1779. Although this was not the first visit by the Captain to this bay, Hogan will be happy to hear that there is no known record of his having said, "You shoulda' been here five years ago."

R. D. Dodge  
Seminole, Fla.

## DISTANCE OFF: ANOTHER METHOD

In "Finding Distance Off" (SAIL, February 1976) author John Mellor states that "... with no tidal influence you need no plotting at all to get your distance off." I would like to offer a very simple method of doing this. The method requires two bearings taken at different times when passing abeam a fixed point. Also required is a fairly good estimate of what speed you are making.

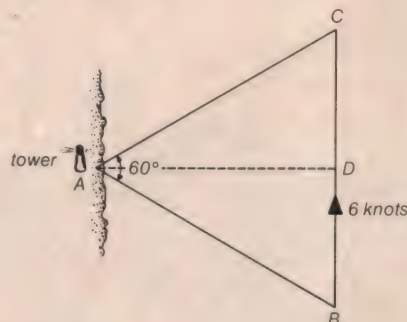
To solve the problem I use the formula:

$$\text{Distance} = \frac{\text{Speed} \times \text{Time}}{\text{Degrees}}$$

Distance = distance from the fixed point (nautical miles)  
Speed = speed being made (knots)  
Time = time between two bearings (minutes)  
Degrees = difference between two bearings

Anyone who recalls the elementary formula should be able to remember this simple variation. The following sketch using an equilateral triangle illustrates how to use the formula. For instance, at six knots it takes 50 minutes to travel from B to C. I calculate AD using the formula:

$$\frac{6 \times 50}{60} = 5 \text{ nautical miles}$$



But AD is actually 4.3 nautical miles. By reducing the angle between bearings, I find I can reduce the error down to about five percent for angles of 10 and 20 degrees. Those working with very accurate figures for elapsed time, bearings, and speeds, can reduce the an-



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swer obtained by five percent, and will have extremely accurate results. For the rest of us we can use the formula and delight in its simplicity and enjoy its effectiveness.

This formula is based on the approximation that one degree of arc at 60 miles equals one mile in length. This can be derived knowing that the circumference of a circle equals  $2\pi r$  and that there are 360 degrees in a circle. Actually, each degree of arc in a circle with a radius of 60 miles measures closer to 1.05 miles. In the diagram at smaller angles the distance AD will approximate the radius, and the distance BC approximates the length of the arc. What it all adds up to is a pretty handy way of computing the distance off a fixed point.

Buzz Sawyer  
Forked River, NJ

### MELLOR REPLIES

Although intrigued by Mr. Sawyer's method, I can see no advantages over the straightforward doubling of the angle on the bow as explained in my article. The disadvantages of Mr. Sawyer's method appear to be threefold.

First, a formula (however simple) has to be remembered. Second, it is inherently inaccurate based on a false assumption that the course steered past the headland is an arc of a circle centered on the headland and tower. Although Mr. Sawyer says, rightly, that the shorter the distance sailed the less the error becomes, he neglects to mention the fact that the shorter the distance, the closer the bearings and the greater will be the inaccuracies in measurement.

Thirdly, his distance off is obtained some time after passing the headland, which could prove to be a very expensive delay.

With no tidal influence (a condition of his method) doubling the angle on the bow entails simply remembering that the distance run between doubling the angle is your distance off. This is mathematically absolute, and the only errors will lie in measurement and unknown tidal streams, leeway, etc. It also gives you distance off before reaching the headland, clearly an enormous advantage.

John Mellor  
Braintree, Essex, England

### BEAM'S END

Canada permits a maximum beam width of eight feet six inches for loads being transported by highway. Now that trailerable boats are fast approaching the 28-foot length, the need for an eight-foot, six-inch beam becomes essential. It is frustrating not to be able to trailer such a boat across the border to the United States to reach some of your fine sailing waters. Before becoming involved in looking for a seaworthy, 28-foot, trailerable boat, I would be interested to know if there is a move afoot to have eight-foot, six-inch boats allowed on US highways.

Kenneth J. Ross  
Toronto, Ont., Canada

*The Boston office of the Federal Highway Administration indicates that the maximum width for a load on all US interstate highways is eight feet. Permits for oversized loads may be obtained from the individual state departments of public works. We have no indication so far that the federal regulations will be changed. — Ed.*

### TABLE MANNERS

Bruce Bingham's "Sailor's Sketchbook" series contains some excellent drawing and design ideas. I would, however, like to make some suggestions regarding the gimballed table (SAIL, March, 1976). If the edge of the table is set five to six inches in from the edge of the bunk, you can eat from it comfortably and there is less chance that the person sitting on the weather bunk will have his knees banged when the boat is sharply heeled.

If the uprights supporting the table are outside the end of the table as they are on the standard Sparkman and Stephens "Mustang" gimballed table, the center section of the table can be allowed to gimbal while you are under way. If this were done on Bingham's design, the table leaf on the weather side would rattle against the center supports when folded down. This disturbs those sleeping in the main cabin, a fact of which I am all too aware, having listened to the table aboard *Iolaire* do it for 19 years!

Donald M. Street, Jr.  
Grenada, WI  
St. Georges







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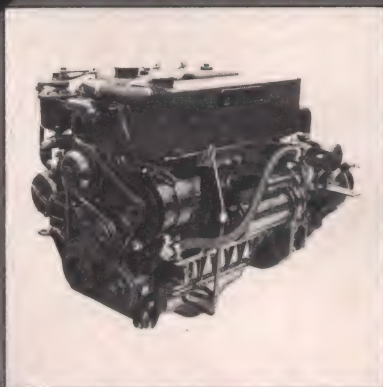
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## Viewpoint

### Recall for a Heavyweight

by Fred Miller



*Fred Miller is one of those aging heavies he writes about. Although he has sailed practically every small boat you want to name at one time or another, he is best known for his exploits in the Finn Class, where he was North American champion in 1961-62, US champion in 1967, and the only American to finish in the top three in the Finn Gold Cup from its inception in 1956 till 1969. A veteran boating writer, he is the co-author with Phil Berman of Multihull Racing: the Hobie Cats, which was published this spring.*

Small-boat sailing today isn't quite what it used to be. While there are more people sailing small boats than ever before in more places and in more regattas, the total numbers of entries in a typical weekend all-class regatta seem to have been declining steadily since 1969.

In part, the reason for the decline is a smaller selection of small-boat classes a normal healthy 200-pound man can go into and hope to be competitive. The competition in all classes today probably is much better than it was 10 years ago, to be sure. But there are few newer small boats. And that same 200-pound man would be hopelessly non-competitive in many of them solely because of his size.

The kind of person who is most frustrated is someone like the old Finn sailor who can no longer sail that wonderful boat because of torn-up knees, bad back or advancing age. As a rule, he doesn't like the un lively feel of keel boats and really doesn't want to sail anything but a dinghy or some other small one-design. And, if he did well in the Finns he certainly wants to be able to do well in whatever new class he goes into. But he finds he can't possibly win if he weighs much over 165 pounds, for the great majority of the 100,000 or so new small boats built during the last 10 years do not have such load-carrying capacity. They are boats for lighter people. Is small-boat sailing at a crisis point in 1976?

It was almost 20 years ago that Paul Elvstrom was involved with the design of the OK dinghy. It was to be a trainer





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weather comfort of a hardtop; plus the wide-open excitement of a roadster. Good idea. Other race- and rally-bred improvements include rack-and-pinion steering, four-wheel, vented disc brakes, and fully independent suspension. Inside, functional instrumentation combined with easy access to controls. Porsche 911S. A classic, a legend in its own time, it's certainly an automobile for which there is no substitute. That is, until now. The

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for the Finn for younger skippers who weren't quite big and strong enough to sail one yet. Elvstrom did a good job; the boat feels just like a Finn, and many top OK dinghy sailors went on to become top Finn sailors. Lightweight skippers, though, didn't have a chance against adult skippers in a Finn in any kind of breeze, and Elvstrom advocated splitting the singlehanded class at the Olympics into two divisions—one for skippers weighing less than 198 pounds and the other for those weighing more than 198 pounds. He pointed out that weight divisions had existed in the sport of rowing for years. But the suggestion fell on deaf ears both in the International Yacht Racing Union and the International Off-shore Council.

Later, when it became apparent that lightweight Finn skippers did have a clearcut advantage in a narrow band of in-between wind conditions, it should have fed fuel to the flame of change. Instead, it did nothing more than add confusion to an already confused IYRU. The Olympics would remain unchanged, but the OK dinghy (and later the Laser) would become quite a bit more than just a trainer for the Finn. Many small and lightweight adults came into these classes and the world championships became as fiercely competitive as that of any class.

High-performance monohulls with the ability to plane to windward have been around since 1952 when the Flying Dutchman and the 5-0-5 came along. But, since both were relatively big and powerful for two-man boats, the weight issue didn't come into full view with them.

Conrad Gulcher, father of the FD, foreseeing advances in construction materials and techniques, intentionally had the boat designed lighter than it could be built at the time. His idea was that when technology did advance, the boat could be built at that weight and it would be the supreme master of monohulls—more so than the day it was designed. It took a quarter century for it to happen, but the FD was the first to underscore the importance of hull weight to performance.

Taking weight out of boats is one thing, but taking "people weight" out of them is another. The Laser and the Hobie Cat came along at about the same time, circa 1968, from opposite ends of the continent. Both were 14 feet long and singlehanders—"mostly foam" as Hobie Alter put it—and as light as you could make them. Nobody really paid attention to the weight thing at first, because in both classes extremely experienced skippers were the first regatta winners: R. Paul Allen in the Hobie cats, and Dick Tillman in the Lasers.

Against the novice early fleets, these two men might have won at any weight. But as everyone learned how to sail these new boats, the weight matter (and problem) became crystal clear. You couldn't be competitive if you weighed much over 165 pounds in either boat, no matter how well you sailed it. Many US sailors are not anywhere near this light. Some never could diet down to it at all, and others would become ill, if not seriously weakened, if they tried.

From the beginning, the Hobie Cats had a minimum skipper weight—for a safety reason. From tests the manufacturer knew that anyone weighing less than 150 pounds could not right a boat from a capsize, so they enacted their "dry weight" rule. The Lasers didn't have the same thing to contend with, so there never was any minimum weight for the skipper. What happened? The kids jumped out of their Sabots and Optimist Prams and into the Lasers. But some weighed as little as 100-120 pounds and nobody could hope to compete with them in anything less than 8-10 knots. Yacht clubs decided to make the Laser the junior program boat, but it turned out that many gremmies were, in fact, too small for the boat. Hence the introduction of the Laser "M" cut-down rig.

Disillusioned adults who had bought Lasers started "over 30" and "over 40" Laser classes at the regattas. But again, the same thing happened. The heavy adults were no match for the light ones, by whole legs of a course. The former



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became so disillusioned that many of them not only dropped out of the Laser class, but out of small-boat racing altogether.

When the 470 first came out, it looked like a wonderful little boat for people like the aging heavies retiring from the Finn class to go into. And it was. For a while. Of course, this boat was the first true high-performance boat in the 14-foot range with an ability to plane to windward. For something so small to spot a Soling five minutes, and then to beat it around the course was really remarkable!

Everybody had fun until the IYRU made the 470 an Olympic class, and the weight war began. Until that happened, skippers and crews weighing a combined 305 pounds, (which is even lighter than two weighing 165 apiece) could win in international competition. But after Olympic fever set in, if a team that weighed a combined 242 pounds showed up at a world championship and if the wind didn't come up in the final races, they would win hands down.

There has to be an answer to the question, where does an average-to-heavy-sized sailor go these days if he wants to be competitive on the basis of sailing skill alone in the small-boat field?

There are classes in which light, live weight is *never* going to be a significant asset any more than heavy live weight is going to be a detriment of any sort.

Unfortunately, these heavier boats are more expensive to build than light ones, in most cases. And they are not quite so easy to push around a boatyard or launch from a beach. Nevertheless, these conventional boats do have their special place, and probably more than ever before. A boat can be built light, and as inexpensively as possible, if the class organization does what was done with the Model A of yacht racing, the Lehman-12 dinghy. Here the boat is weighed and its exact weight is recorded. The skipper and crew minimum combined weight is what the *average* husband and wife would weigh. The amount of weight the hull is over the minimum is deducted from the skipper-crew minimum, and that's the minimum weight *that can be aboard*. The resulting racing is remarkably even, and for that reason this old boat not only has withstood the test of time but has kept many people in the class and has brought in new ones to boot.

More and more, people are saying that time-proven boats such as the Lightning, the Penguin or the Lehman-12 are where the action really is. But you would never believe it from the "ink" they get in the newspapers and magazines.

But those who have met the top skippers of all these classes on common grounds know that they can be every bit as good as those who race the "hot" new boats. These classes should never worry about image. Though they may lack *name* talent, they are never short of talent itself. And in most cases it would be sheer futility to try to "modernize" by building them at half the weight they presently are. The competition is there now, and reducing minimum hull weight would not add to the performance of these particular designs.

Certainly a class organization plays a big part in what kind of image the boat has. If the organization is publicity minded and sends out news releases to the press, the boat inevitably does get its "ink." The more ink a class gets, the more it is known and respected no matter how old or heavy the boat might be.

There is a lot more to sailing than doing it on two hulls, from a trapeze, or planing to windward, and it is once again time for the vast majority of the world's one-design racing classes to take heart. For it is *they* who can have all the fun, while the others have their weight wars! The time has come for sailors to realize that when it comes to racing, there are some great small boats for *everybody*. And there are some other small boats that just aren't for *every body*.





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\**"The gentry had their barges and some their yachts or pleasure sail boats"*  
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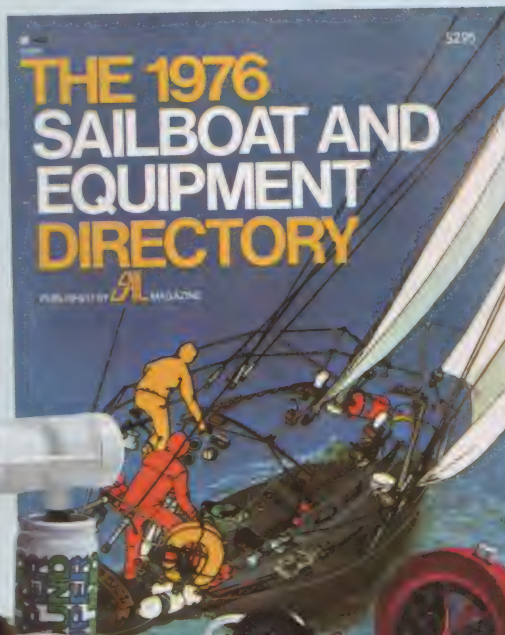
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# Downwind Tactics

While others take it easy, you can improve your position. Sam Altreuter explains

**M**any sailors think of the running legs of a race course as a time when they can take it a little easier; for them it's a time to regroup and prepare for the next beat. Obviously the run does not offer the same opportunities to pass opponents and make the big gains that are available on the weather legs, but opportunities do exist nonetheless. Here are some ideas and techniques that I believe are effective for gaining distance and positions on the run. Some of these are particularly applicable to non-spinnaker boats because the maneuvers require a good deal of turning.

To go fast on a run is simpler than on a beat; all you do is maximize drive and minimize drag. The first thing to do is be certain that your sails are trimmed to give you the most area projected on a plane perpendicular to the wind. That means you must pull the 'chute to weather and out of the blanketing effect of the main (or wing the jib) and push the boom out as far as it will go.

The vang should be set to keep the leech standing. Excess tension will detract from the sail's total projected area by cupping the battens excessively and possibly causing the mast to bend undesirably and flatten the sail. Insufficient tension will permit too much twist and again reduce power. You want just enough vang tension to eliminate twist.

Next to proper sail trim the most important determinant of speed is weight placement. With the board all the way up, or very slightly down to aid in control, the boat should be sailed at an angle of heel that will neutralize the helm. Excess heel to weather gives you a lee helm, and leeward heel causes the opposite. In between there is a point at which the boat should want to sail straight ahead with no pressure on the rudder. When the rudder is used to balance the boat and make it travel a straight line, drag is produced because the blade travels at an angle to the water.

While this element of balance may not seem all that important, it can make for substantial differences in boat speed. Ideally, you want to use the rudder hardly at all, but instead make any minor course changes by altering the lateral balance of the boat. Many skippers like to heel way to weather in order to project the mainsail into more breeze. It is my feeling however that this is only a good idea when the wind is starting to lift off the water as it does in the late afternoon. Only then does it make sense to sail the boat in such an imbalanced condition.

Whenever you decide to try an exaggerated weather heel, be extremely conscious of the results. If it appears that you are not moving as well as you should, immediately abandon the idea and sail the boat in balance. Conversely, it pays to notice whether any of your competitors are moving faster with their weight placed differently. There is no rule that says you cannot copy someone else's good idea. Going hand in hand with the concept of steering with your weight is that of

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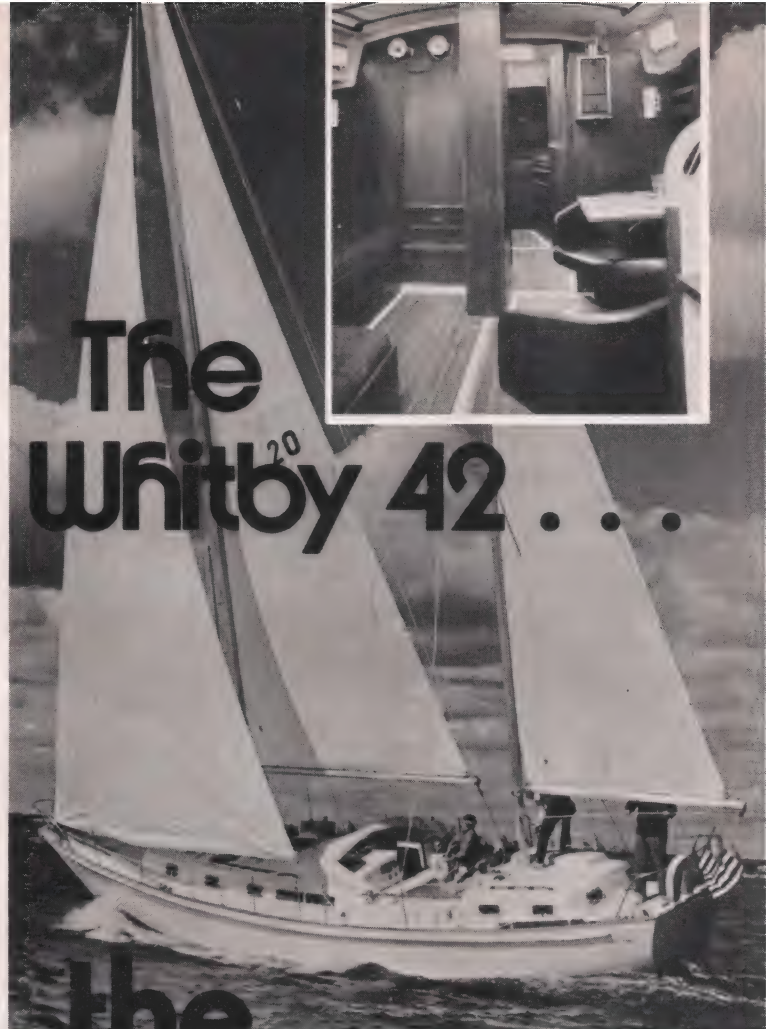
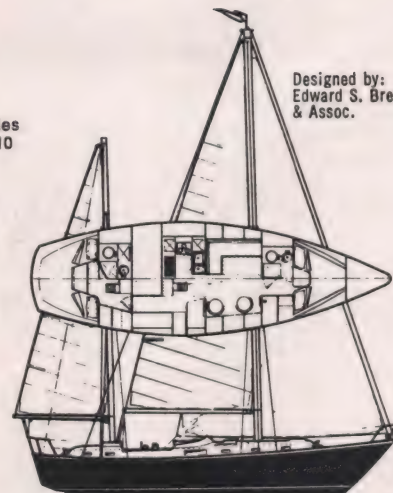


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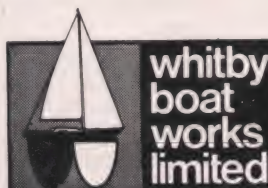
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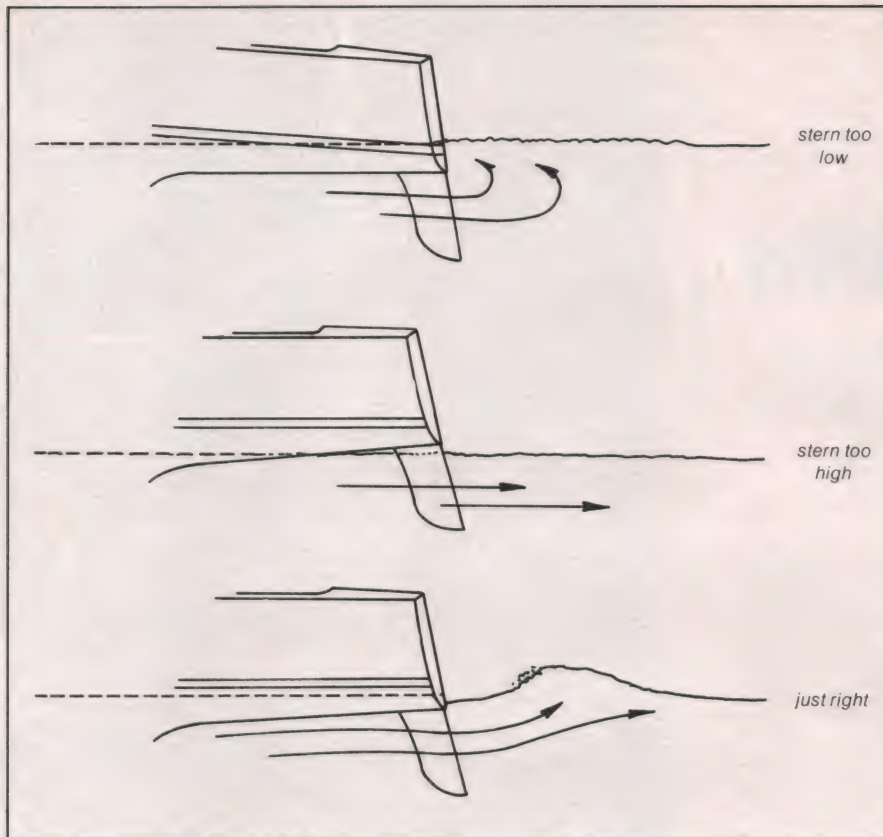


Figure 1: Proper trim for small boats when sailing downwind

minimizing rudder movement. Some very successful helmsmen actually advocate sitting on the tiller to keep from using it at all! I prefer to hold the helm firmly in hand and then force my arm against my body in an effort to keep it motionless except for minor adjustments in trim. It does not matter how you do it, but it is very important to minimize your use of the rudder.

An often ignored or under-emphasized aspect of running speed is fore-and-aft weight position. It is hard to come up with hard and fast rules for this but basically you want to keep the hull on its designed lines with neither the bow nor stern down. In planing hull boats it is desirable to sit as far back as possible without getting the transom too low. Except for extreme light conditions the bottom of the boat should touch the water all the way back. However the water should flow smoothly off the back of the boat and not contact the transom at all (Fig. 1). In medium breezes and up I like to move aft far enough to make the wake directly astern of the boat break slightly. Doing this maximizes the lift generated by the flat sections aft, and helps to lift the hull out of the water well before it has gone onto a clear-cut plane. Keep in mind that to sail on the same lines all the time requires you to move aft in heavy air and forward in light air.

Going fast is only the beginning of a successful running technique. Good strategy and tactics also are essential.

The most important and valuable strategy is tacking downwind, that is, gybing back and forth from broad reach to broad reach instead of sailing straight downwind for the mark. While this requires you to sail a longer path, it can be more than compensated for by the increase in speed.

However, just arbitrarily gybing back and forth across the rhumb line is not all there is to tacking downwind. It must be done in phase with the shifts so that you are always sailing on the headed tack (Fig. 2).

An obvious strategy for the run is to sail in undisturbed breeze. It helps to move early in the leg to one side or the other of the fleet where the breeze is not so broken up by the boats astern. This is especially true in large fleets when you may be just ahead of a large pack of competitors. You must be certain however, that the side of the rhumb line that you move to is at least as favored as the other in terms of current, wind, and waves.

In some respects, the run offers the best opportunities for offensive maneuvers against opponents, and reduces the chance of substantial losses against uninvolved boats. Instead of the trailing boat being at a disadvantage, as he is on a weather leg, he clearly has the upper hand.

In order to execute effective offwind tactics you must be able to gybe without losing ground. First, this demands that you practice gybes ahead of time so you can perform them

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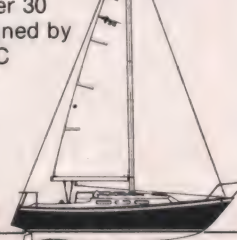
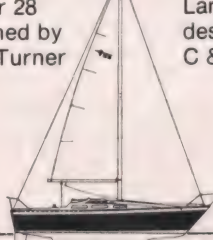
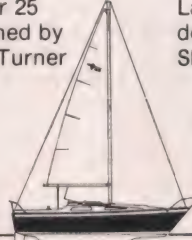
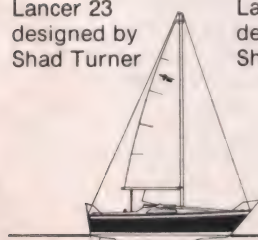
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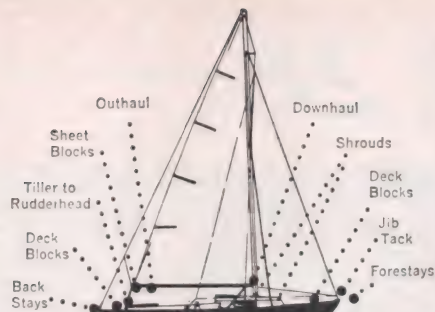
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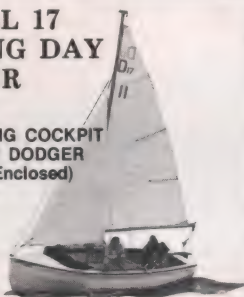
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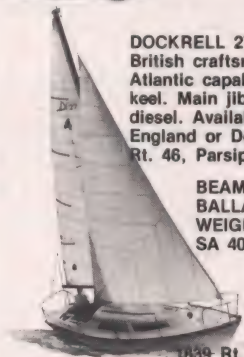


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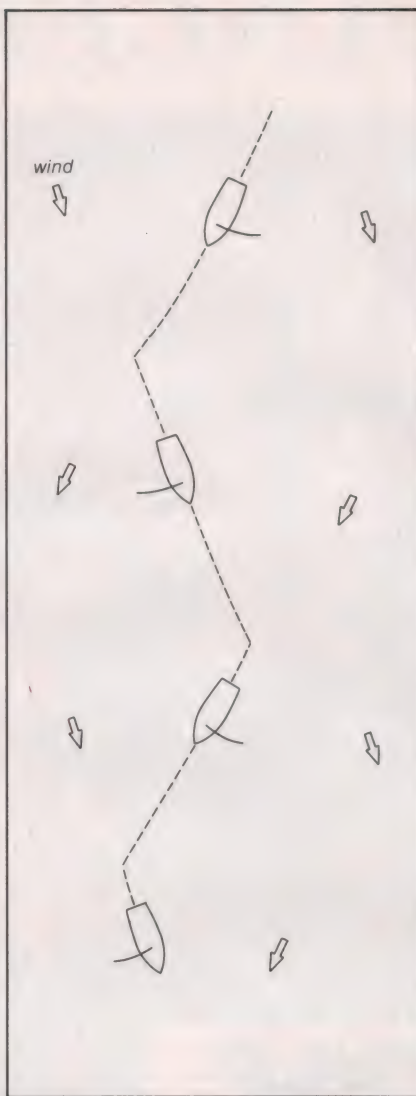


Figure 2: When tacking downwind always try to sail on the headed tack

consistently well. Most small boats without spinnakers respond best to a roll-gybe. In this maneuver the boat is heeled slightly to leeward before gybing. Then, as it is turned, it is rolled sharply to weather and the boom is thrown to the new side with the maximum possible force. If this is done smoothly the boat will seem to jump ahead with the gybe. The difference between this and a slow, lazy gybe is enormous, but it takes a lot of practice to do it smoothly.

The first and most elementary move you can make against an opponent who is ahead is to attempt to take his breeze. If you are sufficiently close to affect him and are not substantially slower, you will, in time, catch up. Once you get within a few feet your tactics will be determined by which tack your opponent is on.

If he is on starboard it is best to sail right up to his transom and then steer just slightly to leeward so as to maximize your blanketing effect as you continue to pass (Fig. 3). Remember that while you are clear astern you

must keep clear of the other boat, and when you establish a leeward overlap you are required not to sail above your proper course. Also, you may not establish an overlap so close that it becomes impossible for the weather boat to keep clear (Rule 37.1 and 37.3). However, you must also consider that the closer you come the more you will rattle the other boat and the more effective your blanket will be.

Another way to disturb his breeze further is to heel the boat somewhat more to weather and thereby keep your sailplan directly upwind of his. This should not be overdone to the extent that your speed becomes adversely affected. Soon your headstay will approach his boom and he will be obliged either to alter course, or to pull the boom in to get it out of your way. Either way you should soon have drawn about even with him.

You have to be careful about having contact with his boom even though he is required to keep it out of the way under Rule 37.1. It is conceivable that he may claim that you established your overlap so close that he was unable to keep clear. The best way to keep out of that kind of trouble is to clarify the situation with a couple of judicious and well-timed hails. Good practice is to hail at the moment you establish your overlap that you have done so. Then later, as you close in upon his boom, but before the situation gets critical, you should hail again. The first time you might say "I have an overlap" and the second, "I'm leeward boat and on my proper course." By emphasizing the moment you gain the overlap, you are also marking the moment at which the right-of-way situation changes. The second hail will make it harder for him to contend in a hearing that you luffed him or that contact occurred very shortly after the establishment of an overlap, in which case you would be in violation of Rule 37.3.

### 37—Fundamental Rules

1. A **windward yacht** shall keep clear of a **leeward yacht**.
2. A yacht **clear astern** shall keep clear of a yacht **clear ahead**.
3. A yacht which establishes an **overlap** to **leeward** from **clear astern** shall allow the **windward yacht** ample room and opportunity to keep clear, and during the existence of that **overlap** the **leeward yacht** shall not sail above her **proper course**.

It is not desirable to alienate your competitor by the arrogance of your hails so it is a good idea to sound as pleasant as possible. However, it is not a good idea to dispense with the hails altogether, because you are increasing your likelihood of going into a protest and then losing because the committee believed the testimony of the other skipper rather than yours. After all, you are the one who will appear to be the "bad guy" and "sea lawyer."

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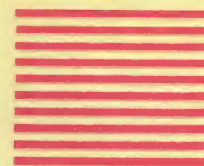
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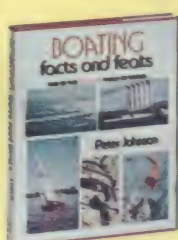
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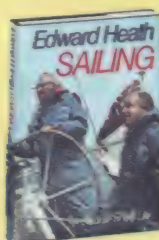
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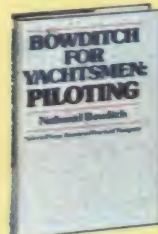
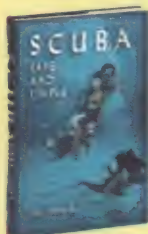
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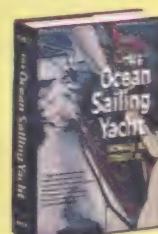
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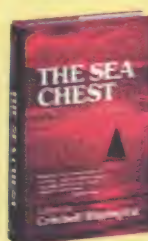
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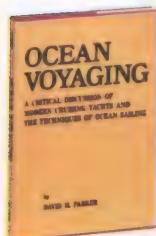
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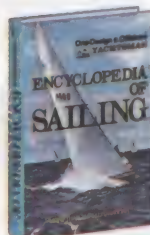
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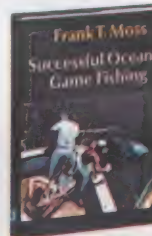
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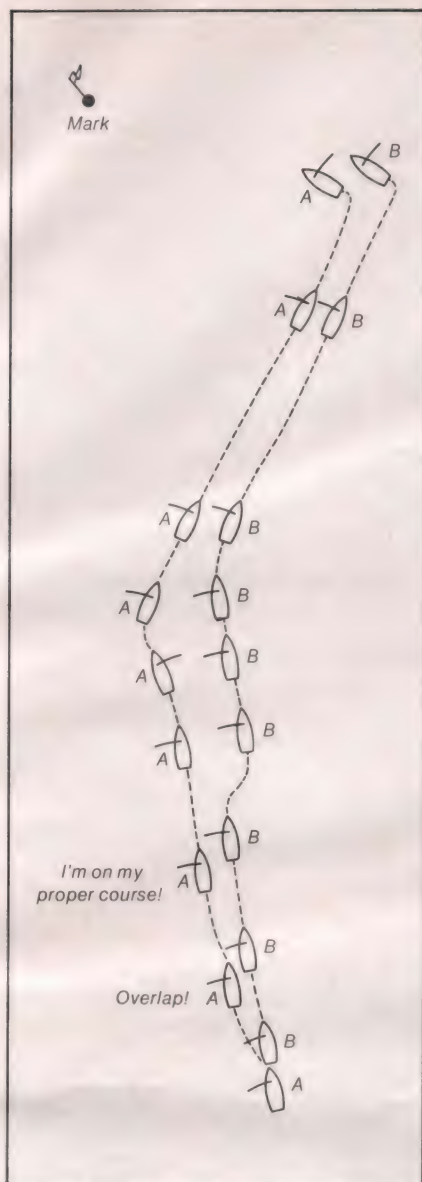


Figure 3: One good way to pass a starboard tacker on the downwind leg

aware of the rules that apply to the situation. I have seen very prestigious sailors just let an opponent run into their booms and never make a move to keep clear, and then heard them argue that they were in the right. The lesson is that you can never assume someone knows the rules.

Once you have come abeam of your opponent you are no longer in a position to gain by blanketing him. If you are fast enough to pass him without any further aggressive maneuvers, all the better. However if you are not, it is best to gybe onto port, move away from him a little and then gybe back onto starboard as shown in Figure 3. Unless your mast is behind the helmsman on the other boat, you have gained luffing rights, and this entitles you to sail higher than your proper course. You then sail as high as you can without losing your luffing rights. Eventually it should be necessary to gybe for the mark and you can do so at any time that

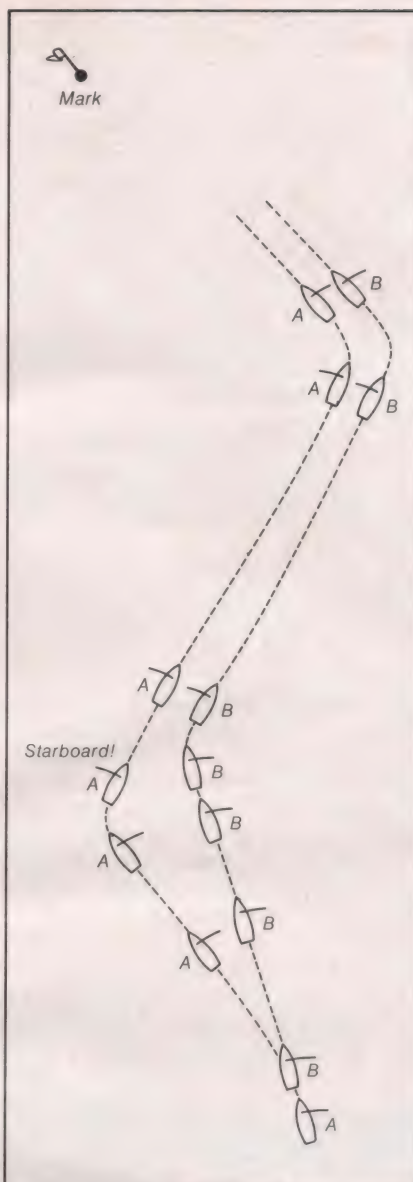


Figure 4: How to pass a port tacker on the downwind leg

is convenient for you. Most likely you will be clear ahead after the gybe and be able to round ahead. This, of course, assumes that you have practiced your gybes and can execute them at least as well as your opponent.

On the occasions when your competitor is on the port gybe, you again blanket him until you have gotten relatively close to him (Fig. 4). After that, you move as if to pass him to weather (to his left). As you do this, make certain to stay in position where you can escape if he tries to luff you. You then gybe onto starboard and start to sail back toward him. Be certain not to gybe too close for under the rules your opponent must be able to keep clear without having to react before your mainsail has filled on the new side.

A hail of "Starboard!" as soon as your sail fills will help identify the movement in the event of a protest. This should aid you in your case. It will also help to break your opponent's

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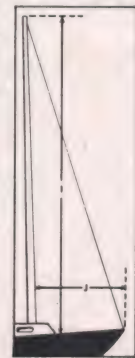
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concentration. Most often he will gybe to keep out of trouble, even if it is apparent that you will not come in contact with him. In the event that he does not gybe you will have to start from the beginning unless you can blanket him while remaining on starboard and force him to gybe to avoid fouling under the opposite tack rule (36). In this case you must be very careful not to break Rule 34 by altering your course in an attempt to foul him out. Once he gybes, you pass him to leeward as I described earlier.

#### 34—Right-of-Way Yacht Altering Course

When one yacht is required to keep clear of another, the right-of-way yacht shall not so alter course as to prevent the other yacht from keeping clear; . . . or so as to obstruct her while she is keeping clear, except:

- (a) to the extent permitted by rule 38.1, Right-of-Way Yacht Luffing after Starting, and
- (b) when assuming a **proper course to start**, unless subject to the second part of rule 44.1(b), Yachts Returning to Start.

#### 36—Fundamental Rule

A **port-tack** yacht shall keep clear of a **starboard-tack** yacht.

So far I have been describing the tactics for the boat behind and assumed that the boat ahead remains passive to maneuvers against him. What are his options and how can he protect himself?

From what I have said so far, it should be apparent that once the trailing boat is overlapped to the leader's left, the pass is nearly inevitable.

Therefore it is in your interest when you are ahead not to let anyone gain that overlap. The best way to do this is to move substantially left as soon as a boat astern starts trying to take your air. It should be your intention to discourage him early and decisively so you can avoid a duel in which you would have nothing to gain. Under Rule 39 you are required not to sail below your proper course to prevent a yacht clear astern from steering to pass you to leeward if that yacht is within three boat lengths. This is one more reason to *make your move early*.

#### 39—Sailing Below a Proper Course

A yacht which is on a free leg of the course shall not sail below her **proper course** when she is clearly within three of her overall lengths of either a **leeward yacht** or a yacht **clear astern** which is steering a course to pass to leeward.

You should also remember that you may always gybe onto port. If your opponent is close astern because you did not shake him loose or because you just passed him, it is even more important to protect your left side. One way to do this, if it appears your opponent is going to persist, is to move quickly to the left and then come back again on starboard. You will want to lose a little ground so you will be overlapped with him and can luff him to the right-hand side of the leg. Then you can gybe at the time of your choosing to round the mark.

Sometimes it is best not to be excessively aggressive on a run. One example is when you are in second behind a helmsman whom you expect will not be easy prey to the tactics so far described. A duel at such a time might not even succeed and would surely give other boats astern a chance to catch up with you. Before you start something, it is best to think carefully about the probable results.

One last trick which is very helpful and very simple is knowing how to dodge your opponent's wind shadow. The "shadow" extends from a boat's sails in the direction of its apparent wind, not the true wind. A handy indicator of an opponent's apparent wind is his mast fly and telltales. Often on a broad reach you can stay just to weather of the wind shadow of an opponent astern and not have to sail substantially above the mark. With surprising frequency he will not even recognize that you are not blanketed.

The real secret to success when running is to do everything well at once. You have to go fast all the time, always go in the right direction, and be able to use effective tactics that are relative to the boats close to you. If you can even come close to this, you will be doing well.



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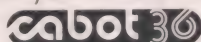
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**Show Hours** Trade/Press Day, Sept. 9, 10 am to 2 pm; Public Days: Thursday, Sept. 9, 2 pm to 7 pm; Friday, Sept. 10 thru Sunday, Sept. 12, 10 am to 7 pm

**Admission** Adults—\$4.00, Children (age 12 and under)—\$2.00

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**Show Hours** Thursday, Sept. 16 thru Sunday, Sept. 19, 11 am to 7 pm daily.

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October 8-11, City Dock & Harbor, Annapolis, Maryland

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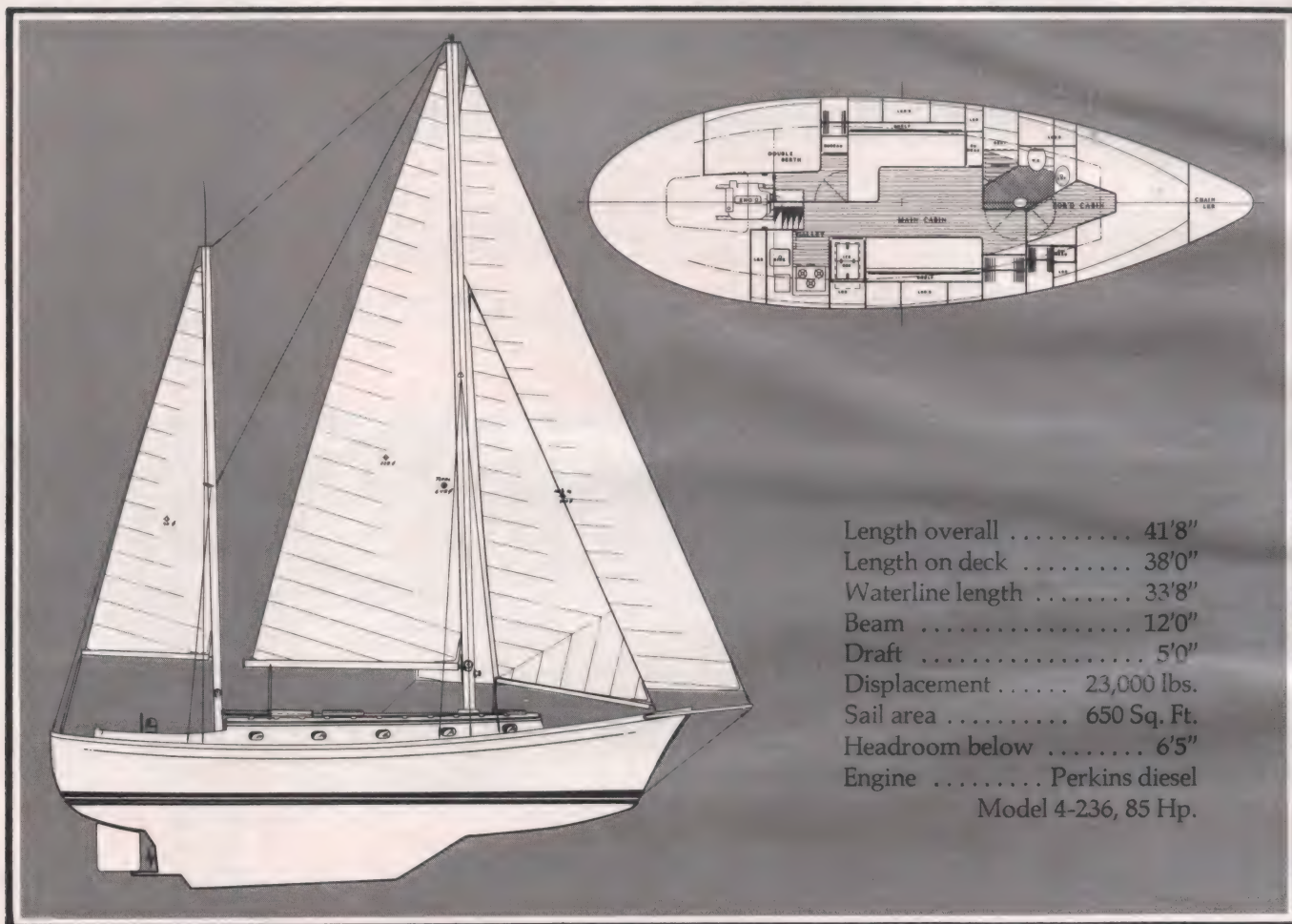
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# Taking the End of a Towline

William V. Kielhorn describes how to handle this uncommon situation

**S**ooner or later you are going to be on one end of a towline, if you stay in the boating game. Which end it may be depends upon your skill, judgment, and the degree and direction of your luck. In the subsequent paragraphs we will explore some of the techniques of towing and pulling that are used in small-craft seamanship. But always keep in mind that there are about as many variations and circumstances as there are sailors.

The most common situation occurs when a motorboat or sailboat is disabled in good weather on a Sunday afternoon. The statistical chances of *all* the boats off Annapolis, Marblehead, or Sausalito being in good working order at that time are practically nil. To be sure, many that are disabled will simply call the Coast Guard or the Marine Patrol, and ask them to handle the matter. Personally, I think this is very bad form. These fine people will always help if at all possible, and for free, if they can. But they are spread very thin, and a routine towing job can take them far from where they are *really* needed—to help with collisions, fires, and so forth. Their services should be reserved wherever possible for *real* emergencies, and not to alleviate an inconvenience. We, as yachtsmen, should be more than willing to help our own kind; especially knowing that the tables could well be reversed some day.

I have read several articles lately, authored by lawyers, who warn of the possible liabilities that might be incurred by the helper of those in minor distress. In my view as a seaman, this is antithetical to proper moral procedure. Anyone who fails to take all reasonable measures to help his fellow man in trouble at sea should never be considered either as a person or as a member of the fraternity of the sea.\*

As one example of a common occurrence, let us say that you are cruising, and come upon a yacht stopped and lying broadside to the wind and sea. A closer look reveals no fishing lines overside, and a double arm-wave from someone on deck indicates that all is not well with them. Coming within hailing distance, you learn that their engine has quit, and they would appreciate a tow to port, or at least to shelter. What should you do?

The first thing, if you have an auxiliary engine, is to start up and lower all sail. Unless there is need for great urgency, take all the time that is necessary to put the sail stops around the boom and headsails, and make up the halyards and sheets neatly so your own decks and cockpit will be clear of extraneous cordage and gear. Decide whether to pass him *your* line or to take his. I prefer to pass *my* line, because I know its strength and characteristics, and because this simplifies the casting-off procedure for everybody later. I will assume that you will use your nylon anchor-rode as a towline, as this is the usual practice. When your line is unbent from the anchor, and is neatly flaked or coiled near the

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towing bitt or cleat, you are ready for your approach.

I prefer the approach shown in Figure 1. This one has several advantages. At point A you should be in a good position to talk with the helmsman or skipper of the boat you expect to tow, and to give your intentions and instructions. You should ask that chafing gear be put around the line where it passes through his chock or deck-edge, and you should also ask that he keep steering towards your stern during the tow. At point B you will be headed nearly into the wind at low speed, but with good control, and should have no difficulty in throwing the towline to his man on the bow. In moderate weather it is generally possible to come close enough simply to pass the line to him. Immediately after your stern clears the other boat, turn sharply in the direction he is headed and stop. You are now in a safe position to wait for him to secure the towline, to put on the chafing gear, and to get his bow man aft. The greatest danger in passing a line by this or any other method lies in the possibility that it may foul in your own screw. Therefore, it should always be tended by hand when it is slack.

Unless your craft is much larger than the tow, you should make the towline fast at a point well ahead of your rudder.

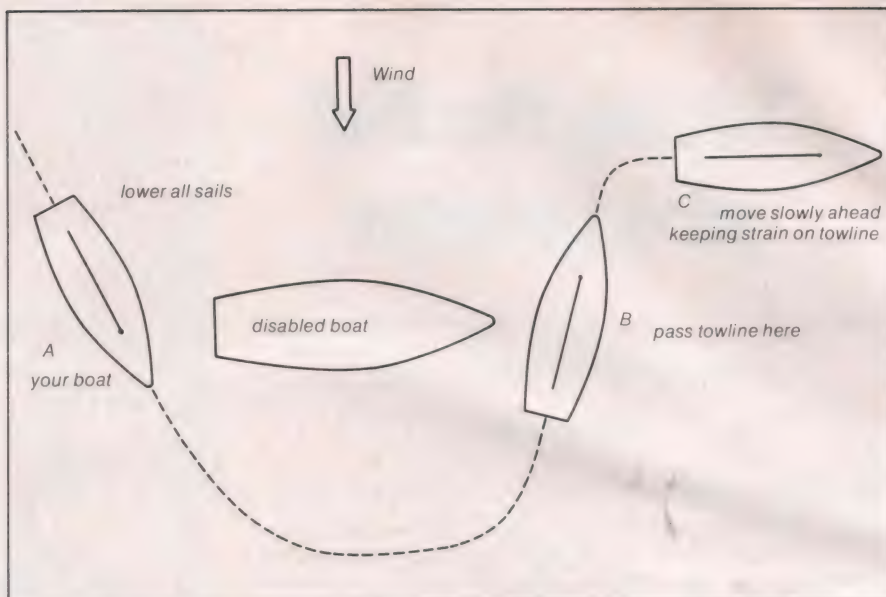


Figure 1: A proper way to make an approach on a disabled boat

der. If you do not do so, you may well lose all steering control. I find my jib-sheet winches to be a good towing point; you may find another location on your boat is better. One advantage of towing from a winch is that it facilitates adjustment of the towline length when under way and most jib winches are very strong.

The watchword of getting under way

with a tow is *slowly*. If there is plenty of sea-room, make your turn toward the desired course in the direction which will lead the towline over the stern and side clear of all stanchions or other obstructions—even if you have to turn in excess of 180 degrees. Pay out the line easily but keep some tension on it. Doing so turns his bow toward the direction desired, and prevents possible



Any experienced cruising man will tell you that bow-sprits and baggy-wrinkle are not always synonymous with serious cruising boats. What does count is solid construction, functional decks, warm interiors and clean lines. That's the ONTARIO 32 and that's quality.

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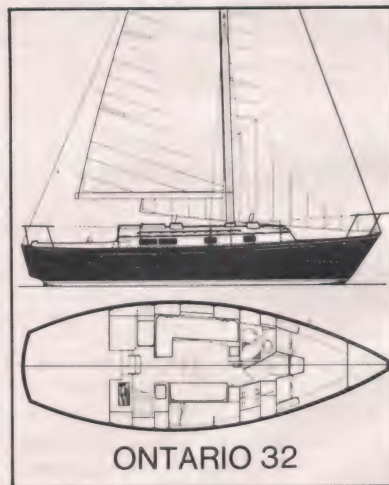
The mechanical installations are handled with the same care. The engine, for example, of the ONTARIO 32 is Flex-mounted, something uncommon for a production boat.

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The ONTARIO 32 comes to us from the drawing-board of Cuthbertson and Cassian and that's quality design.

### Specifications

L.O.A. 32'	Draft 4'6"
L.W.L. 26'6"	Disp. 9,500 lbs.
Beam 11'	S.A. 481 sq. ft.



ONTARIO 32



# ONTARIO YACHTS

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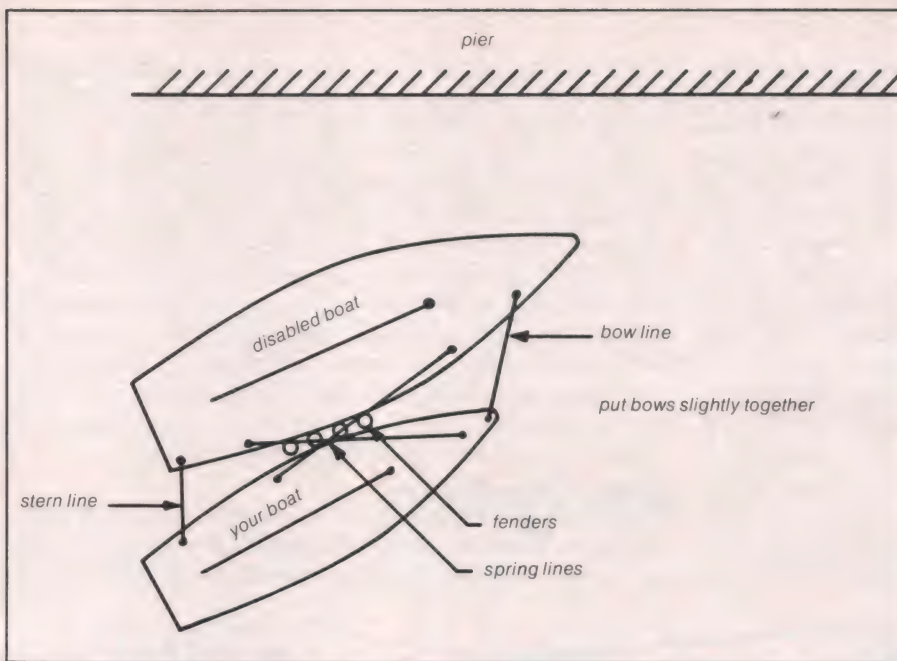


Figure 2: When towing from alongside, put boat well ahead of you in order to maintain good steering ability

fouling of the line in your screw. Make the turning circle very large, and proceed slowly.

If a little sea is running, adjust the towline length to be about equal to the apparent wavelength of the sea. The effect is that most of the time each boat will be on the face or the back of a wave

simultaneously. This reduces greatly the surging forces on the towline. Then, increase power slowly to a safe cruise speed, having due regard for the stresses on the towline and fittings.

Once the course has been set, you have the option of towing either under power or under sail. Please don't scoff

at the latter option. I have towed under sail boats at least five times the displacement of my own boat, quickly, efficiently, and quietly. Of course, if you are in a strong wind, and are trying to beat to windward, power is the only answer. But if you are on a reach, a broad reach, or sailing downwind, you might be happily surprised how nicely and easily it can be done. Only a year ago I picked up a disabled 33-foot power cruiser nearly aground off a dangerous point in Chesapeake Bay, and towed it for many miles to a marina where its lost rudder could be repaired. The wind was a little abaft the beam, and his drag was not very much more than that of a large dinghy—and this, by a little sloop whose length was only 20-feet on the waterline! Our tow speed was four knots.

Upon reaching sheltered water and close quarters, you will want to shorten the scope of the towline. If your tow is larger than you are, he will carry his way longer, and could ram you from astern or slacken the towline into your screw if you just stopped. So again, easy does it. In most cases you can make his approach to the landing or mooring for him, having him cast off your towline at the proper moment. If the quarters are very tight, you may wish to tow him alongside harbor-tug style. In this case, find out from him

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which will be his landing side, and tow him from the opposite side.

Figure 2 illustrates the alongside method, which should be used *only in calm waters*. You should tow him from a position well aft, as indicated by Figure 2, in order to keep good steering control with your own rudder. Use two spring lines and two breast lines, all snugged in very tightly, and use plenty of fenders. This is one situation where less elastic line is better than nylon. Sometimes a Dacron halyard can be used advantageously. On the approach, come in toward the pier at a steeper angle than usual, and more slowly. When you back down, your stern will swing in toward the pier more than usual, and your backing power will be less because of the increased mass of your having two boats to control rather than one.

Another common situation is grounding. We will discuss only a grounding on gravel, sand, silt, mud, or clay. If the grounding is on hard rock on a falling tide, attempting to haul free may be the worst thing you can do. Many a bottom has been ripped open, and the boat sunk unnecessarily by trying to get off too soon in this situation. It is better to wait for the next tide.

But most yacht groundings do occur on relatively soft or benign sediments in sheltered waters where there is no immediate danger to life or property. The causes are legion. Fog, compass error, use of an old or inadequate chart, inattention to tidal state, shoaling areas . . . all contribute to this inconvenient and embarrassing situation. Sooner or later you will feel the keel touch bottom, and will experience a dismaying deceleration. This moment will probably be accompanied by some impolite expressions—and there you are.

You may be fortunate enough to touch bottom when the wind direction is blowing you towards deeper waters. If this is the case, your sails can help. By trimming the main, and by trimming or backing the jib or headsails, you may be able to heel and twist enough to come off at once with a little help from the engine. If this fails, or if the wind is forcing you harder aground, let go all halyards at once. You will have to haul off.

The first thing to do is quickly to get an anchor out toward deep water. If you have a dinghy or raft, lay out your best anchor as far as possible. If you have no dinghy, and not a very large yacht, a swimmer in a life jacket can easily carry out a light but effective anchor (such as a five-pound Danforth). Take a heavy stress on the rode from the bow, if possible, and try to twist the bow seaward. If the bow does twist seaward, keep on winching, get the rest of the crew as far forward as

possible, and use full engine power.

If the wind is abeam, or anywhere but ahead, hoist the mainsail and try to heel off. Without wind, or with the wind ahead, you may wish to heel by putting out a second anchor just forward of the beam attached to the masthead halyard to heel the boat over. This requires plenty of scope, and should include a spare anchor rode bent to a halyard with a sheet-bend. Many yachts have a propeller located forward of the rudder, and the screw current impinges upon the rudder. By slewing right and left using the rudder and full engine power, the craft may "walk" off the shoal.

You can multiply the force on the anchor cables by use of purchases or multiple purchases stopped to the cable and led to a winch. In larger ships this is known as "beach gear." Ordinarily, this arrangement is not required in order to free small craft. It can be dangerous, and no one not actually required for the operation should come near it. Nylon line (or steel cable, for that matter) stores a great amount of energy under heavy tension. Should such a line part, this energy will be released instantly, and the line may fly back with deadly force. A supervisor should watch the entire operation very carefully, keeping an eye on all lines and fittings, and should not engage in the operation itself, if possible. He alone should give the orders.

If all these measures fail, and you are on a falling tide, be resigned to a long wait. But don't be idle. As the tide recedes you will heel more and more. Now is the time to do two things: caulk any openings vulnerable to flooding if the boat heels too far, and protect the hull wherever it might lean onto a boulder or other obstruction. A mattress, cockpit cushions, two-by-fours, etc., all can help, and are far cheaper than a hole in the hull.

One time many years ago I grounded on a falling 20-foot tide in Alaska, and found plenty of driftwood to shore up the boat in nearly an upright position. Not only were we totally undamaged, but this circumstance afforded an opportunity to scrape barnacles off the bottom!

To summarize: don't hesitate to lend a helping hand to a fellow yachtsman or fisherman. Don't call the Coast Guard unless there is reason to believe that life or property is actually endangered. At that point though, don't hesitate an instant to call them. And don't ask or accept remuneration for being a Good Samaritan. Your rewards will be far greater if you do not do so. And above all be patient, and never turn an irritating inconvenience into a disaster.





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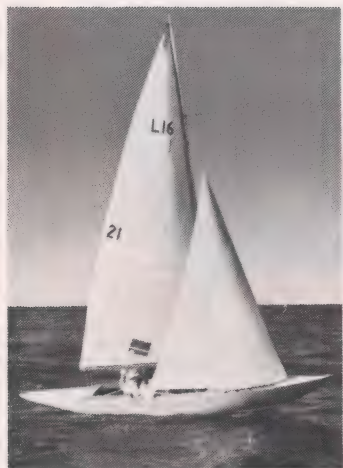
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"DYNA" - shown sailing to her Annapolis-Newport win

Murphy & Nye has been making racing sails for a long time. In fact, even if we can't claim to being the oldest sailmaker, it's safe to say that we've been the most consistent sailmaker, with major wins every year, in small and large boats.

It was over four decades ago, 1933, that Jim Murphy & Harry Nye formed their partnership. Jim Murphy had been a sailmaker since 1879 when he apprenticed with H. Shannon & Co. in Chicago. Jim made the sails and Harry Nye, a long-time sailor, sold the sails. After Jim's death the next year, Harry took over the reins and hired Mel Jones to handle the loft responsibilities.

Fledgling Murphy & Nye got its Big Boat start when Lynn Williams, present owner of the maxi **DORA IV**, carried our first big yacht sails on his father's schooner, **ELIZABETH**. In her first year, 1935, she won the Chicago-Mackinac race and our tradition of speed had begun.

Throughout the years Murphy & Nye has pioneered many sailmaking developments. That's one reason we've been winning for so long. For example, Murphy & Nye made the first parachute-type spinnakers in the U.S. (Previously racing yachtsmen relied on "ballooners" or super full reachers). Such a spinnaker was made for Clyde Larish, owner of **WINDSONG**, in 1936. Sails at this time were made from imported English Egyptian yacht cloth and roped with Italian hemp. To keep our ropers busy in winter months and avoid expensive inventory levels, we invented a new method of making yacht sails. We sewed endless hemp to sail material during the winter, and when the cloth and orders were received in spring, the pre-roped material was attached to the newly cut sail. Murphy & Nye patented this procedure in 1941 and, although the patents ran out in 1958, most sails made today are roped using this system.

We often used the Star class as a testing forum. So it was not unusual that our Dacron sails first appeared in this class in 1954. Charlie DeCardenas won the Star Worlds that year in Portugal. Murphy & Nye dacron sails powered him to four firsts and a second.

In 1955, we pioneered the crosscut Genoa and used it successfully on **ROMAHAJO**, which later won the



Queens Cup. In 1958, after successful applications in the Star class, Murphy & Nye patented the adjustable luff jib design. Now with a wire unseized in the luff, yachtsmen could more effectively adjust tension and make changes in a sail's shape. In 1973, Murphy & Nye Sailmakers teamed with Dr. Jerry Milgram to develop a workable computer program to optimize sail shape. These are some of our well known pioneering developments in sail-making. It has meant many

winning races for our customers. And it's indicative of our constant search for logical changes which will make our sails faster and more efficient.

The Murphy & Nye tradition of quality, and our attention to detail, has kept us at the top for over four decades. If you want your sailmaker to be the type who is looking toward the future while building on the experience of a proud past, call Murphy & Nye. Our sail designers are anxious to talk with you.



"CRACKERS"

1975 North American 1/2 Ton Champion

- 1933** - Jim Murphy & Harry Nye, Jr. form the partnership of "Murphy & Nye" to build Fine Yacht Sails.
- 1935** - Our first big yacht sails are winners, as **ELIZABETH** wins the Chicago Mackinac.
- 1935** - Murphy & Nye is the first sailmaker in the U.S. to make the modern parachute-type spinnaker.
- 1937** - We build our first Star sails and Milton Wegeforth uses them to win the Star World Championship. (1922 - The father of Bob Bottger, now the manager of our Wisconsin loft, produced the first eleven sets of Star sails.)
- 1941** - The modern rope-on-tape method of sailmaking is pioneered and patented by Murphy & Nye.
- 1941** - Murphy & Nye assists the war effort by making bomb parachutes and wire mesh nets for aircraft carriers.
- 1945** - Star sails made of Orlon are introduced by Murphy & Nye and prove to be faster than cotton but more abrasive.
- 1952** - Star sails made of Orlon are introduced by Murphy & Nye and prove to be faster than cotton but more abrasive.
- 1954** - Dacron for one-design and offshore racing is introduced by Murphy & Nye and Carlos DeCardenas wins the Star Worlds with our Dacron sails.
- 1955** - Murphy & Nye begins making the first cross-cut Genoa's, replacing the old miter cut.
- 1956** - Murphy & Nye strikes gold in its Olympic effort as Williams wins in the Star Class with our sails.
- 1957** - **DYNA**, with Murphy & Nye race inventory, sweeps both Mackinac races.
- 1957** - **NORTH STAR III**, with its noted skipper, wins the Star World Championship in Havana with Murphy & Nye sails.
- 1958** - The adjustable luff jib is developed and patented by Murphy & Nye.
- 1959** - **RANGOON**, with all Murphy & Nye sails, is awarded the "Boat of the Year" trophy for the second straight year.
- 1961** - We successfully open our original Annapolis loft as **DYNA** wins the Annapolis-Newport race.
- 1962** - It's the year for **HILARIA** as she uses her Murphy & Nye sails to win the St. Petersburg-Ft. Lauderdale and Nassau Cup Races.
- 1963** - **BLITZEN**, custom designed by S & S and race equipped by Murphy & Nye, wins the Chicago MAC — a feat which she will duplicate in 1966.
- 1964** - A famous Wisconsin Scow sailor wins the Silver Olympic Medal with his Murphy & Nye Flying Dutchman sails.
- 1967** - **GYPSY** is named Lake Michigan Yachting Association's "Boat of the Year". It's the third straight year this award was given to a Murphy & Nye-equipped boat.
- 1968** - **INFERNO** uses her Murphy & Nye sails to become only the second boat, and the first in 35 years, to win all three legs of the Tri-State Race.
- 1972** - **GANBARE**, first of the modern one-tonners, is powered to her North American Championship by Murphy & Nye.
- 1972** - **EYGHTENE** wins the 1/4-ton Worlds with Red Bags on board.
- 1973** - Murphy & Nye pioneers the small boat Dynac spinnakers and wins the 470 Nationals and North American Championships.
- 1973** - In conjunction with Dr. Jerry Milgram, Murphy & Nye begins using computers to design high performance sails.
- 1975** - Our Lightning sails and sailors continue their dominance of the class, winning the World Championship for the 9th time in the last ten years.
- 1976** - Murphy & Nye powers another Star World Champion. It's our second Gold Star in a row and our 19th in 30 years
- To Date** - Our sailmakers are sailors, too. Our current team has won over 11 World Championships, 19 North Americans and 24 National Championships.



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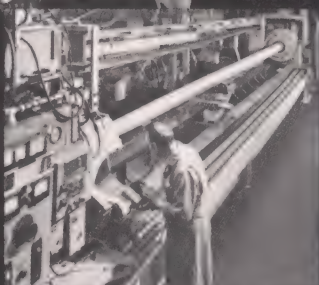
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## When a New Crew Is Aboard

Roger Marshall shows how to  
learn the ropes . . . fast

**A**ll of you who have done any sizeable amount of ocean racing have been new crewmen on some boat. But how many of you were really well prepared by the time the start gun went off? For example, how often have you gone on board late in the afternoon before an overnight race and been offered a drink rather than a tour around the boat? How often have you accepted that drink and found yourself later dropping the main instead of the spinnaker, or making some similar error in the dark? And how many times during the first night did you ask "Where's the such-and-such?"

With a little forethought both on the skipper's and a new crewman's part, all this embarrassment of being uninformed can be avoided simply by asking the right questions and receiving the correct answers. Part of this involves an early and complete tour of the boat. When you do join a new boat for the first time accept that refreshment, but don't sit down with it. Instead, take a walk around. Find out where your position on deck will be and spend a few minutes familiarizing yourself with all the locations of the nearest ropes, handholds, stowage places, and other fittings. By actually undoing a halyard or sheet, you probably will remember where it leads much better than if you simply look at it.

In fact, before you even join the boat, you might want to take a 3 x 5-inch card and write down all the questions you want to ask. If you can't think of anything here is a list of questions that can work for most crew positions, subject of course to individual modifications, depending on the boat.

### Foredeck Man

Are port and starboard halyards color-coded both at the shackle and at the winch end? (If so, note the colors.)

How is the spinnaker pole hooked up/released?

Where are all the sails and sheets, spare shackles, blocks, and so on, stowed?

What method of spinnaker set/takedown usually is used?

### Middeck Hand

In what order do halyards exit from the mast?

What method of raising/lowering/gybing the pole is usually used?

Check the halyard leads; what cleats take which halyard?

Where is the vang stowed or, if hydraulic, where is the pump and handle?

Where is the nearest winch-handle stowage?

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at family prices*

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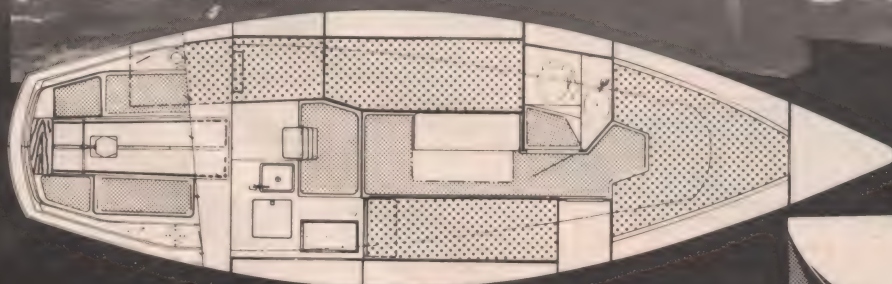
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*Price?* \$18,950.

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### Afterguard

Check the sheet leads; where do the spinnaker sheets lead?

What happens on spinnaker set, gybe, takedown?

Where are handles and spare gear stowed?

Is there a "short" sheet aboard? Is it used?

### All Crewmen

Where and how are the following items stowed:

Emergency tiller

Flashlights

Life raft

Flares

Spares

Toolbox, including emergency tools

Life jackets

Harnesses

Man-overboard poles and horse-shoe rings

One of the other problems associated with joining a new crew is learning names. There is only one name for you but there usually are five or more other crewmen also with names. There is no hard and fast way of tackling this problem. A method I use which appears to be effective is to remember some distinguishing feature. For example, Fred may have an

accent, thus he becomes: Fred, the accent; Bill carries a knife and spike set, so he's Bill, the spike. Although this method sounds too simple to work, I find it works for me and it is easy to use.

Once you have made a thorough tour of a new boat and have asked your questions, you can go off racing hopefully without having to ask "Where's the such-and-such?" (at least not too many times).

One thing you should always keep in mind when learning your way around any new boat is to familiarize yourself with the entire layout, not just a single area. The reason is that, when you are racing, it always is a good idea for crew members to rotate positions. Rotation is especially important for the helmsman. On some boats I know about, the skipper takes the helm for several hours at a time because he is the most experienced.

However, if you really want to win, you must break this habit. Studies have shown that the *maximum* period of concentration for the helmsman is under 40 minutes; and after 15 minutes, concentration begins to ebb. By changing helmsmen every 30 minutes, it soon will become apparent how much you can gain over a boat that has a helmsman that steers for three or four hours.

Knowing the optimum length of time a crewman should perform a particular task is only one part of solving the crew rotation problem. Crews often have no set method of rotating duties; what follows is only a suggested system for a four-man watch. Obviously it can be modified to suit a two-man or a six-man watch and the skipper is probably the best judge of how to modify a rotation system that best suits both the size and the varied skills of his own crew. Assuming a standard four-hour watch, one man's duties over the four hours would include:

Helm—30 min.  
Weather Rail—30 mins.  
Sheet Trim—30 mins.  
Weather Rail—30 mins.  
Helm—30 mins.  
Weather Rail—30 mins.  
Sheet Trim—30 mins.  
Weather Rail—15 mins.

Then the crewman would go below, put a kettle on to make hot drinks, and wake the other watch. The theory behind this system is that a crewman steers for 30 minutes, then rests for 30 minutes before he takes his turn calling sheet trim. If there are four men on a watch, each man has two tricks at the helm, two on the sheet, and four on the rail.

This system negates the boredom that results from having one man sit for four hours on the rail while the skipper steers for four hours. Incidentally, the



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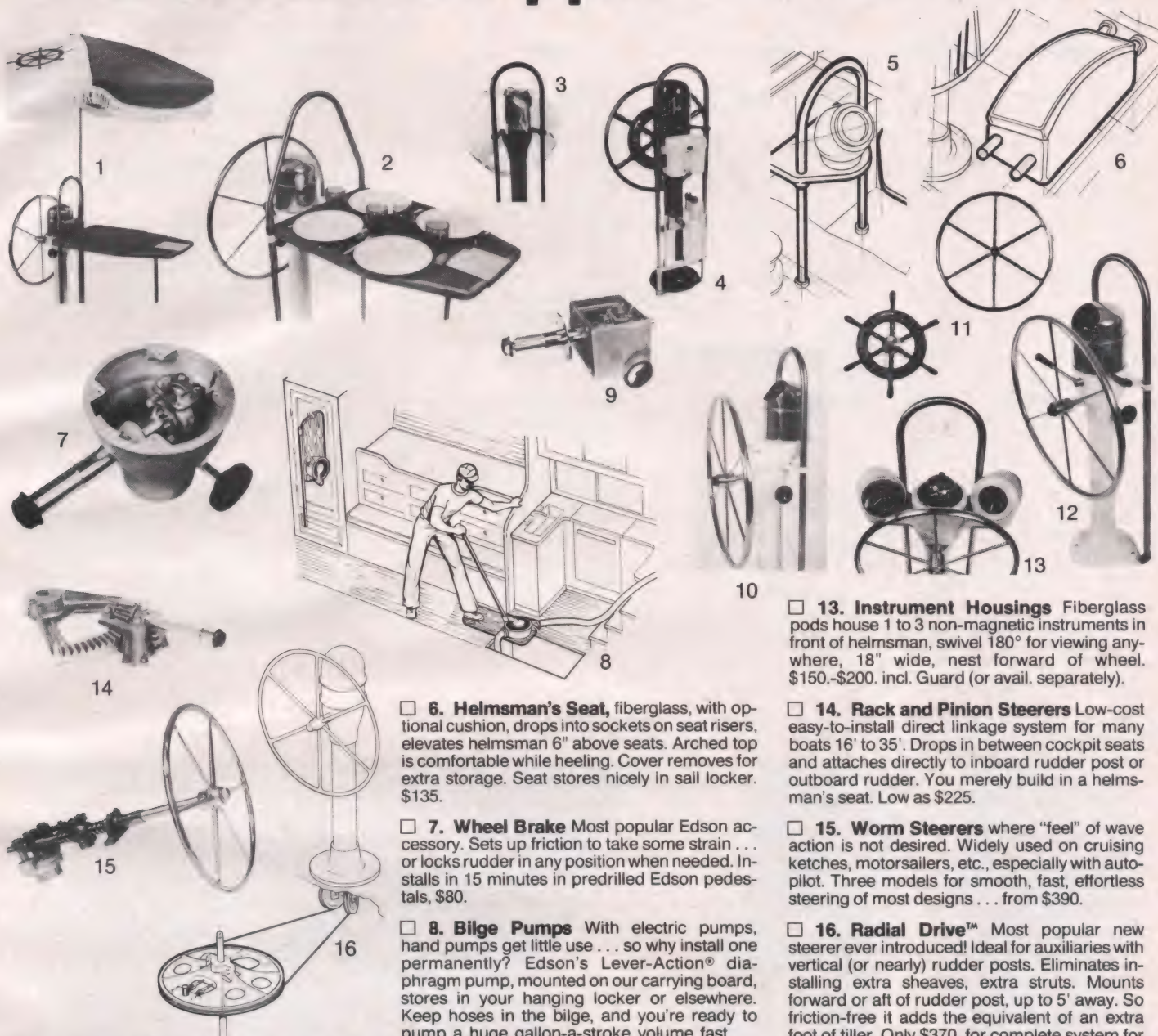
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☐ **6. Helmsman's Seat**, fiberglass, with optional cushion, drops into sockets on seat risers, elevates helmsman 6" above seats. Arched top is comfortable while heeling. Cover removes for extra storage. Seat stores nicely in sail locker. \$135.

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☐ **9. Bulkhead Steerers** for built-ins, consoles, divided or center cockpits, bridge decks, etc. Stainless needle bearings available to reduce friction and increase "feel". Ideal for auto-pilot or second station. From \$58.

☐ **10. Compass Extender** White molded fiberglass unit raises compass 3½", moves it forward 3" for easier viewing. Adapts 5" or 6" compass to smaller pedestal, too. \$40-\$43.

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Watch Change	Preparation	Crewman	Duty
12 midnight	11:45	Last man on weather rail	Make hot drink Wake new watch
	12:15	First man of new watch on rail	Wash up and prepare for next change
4:00 AM	3:45	Last man on weather rail	Make drink, wake up new watch
	4:15	First man of new watch on rail	Wash up
8:00 AM	7:30	Last man on rail	Cook breakfast for on-going watch
	8:30	First man of new watch on rail	Cook breakfast for watch coming below
	9:00	Second man of new watch on rail	Clean up
12:00 noon	11:30	Man on rail	Make sandwiches for lunch; wake watch and feed
	12:30	First man up	Feed watch coming below and clean up
4:00 PM		Man on rail	Snack and drink
8:00 PM	7:00	Man on rail	Prepare if req'd
	7:30	Last man on weather rail	Cook dinner; make and feed on-going watch
	8:00	First man up	Feed off-coming watch; clean up
	8:30	Second man up	Clean up if required

final 15-minute trick on the rail, followed by making a hot drink before waking the other watch, helps ensure that all new crewmembers arrive on deck awake, *and on time*.

If there is no regular cook on board, the man coming off the morning watch at 7:30 can make breakfast for the on-going watch. Again, a flexible system can be developed to make the most of all watch changes, but here is one way to go about it.

Such a system does not have to be rigidly adhered to, but it does provide a basic plan that a skipper can modify to suit his own needs. It also gives everyone a chance at the good jobs and the bad jobs. And by making use of the men on watch who are not busy, it ensures that the off-watch gets enough sleep to sustain maximum efficiency on deck where it counts. However, for races of 200 miles or less, the entire crew should turn to for sail changes as this length of race is a sprint.

After looking at a rotation system like the one I have outlined here, you may have your doubts about whether you or your crew would be able to take the discipline involved. While you may not like it, this is the kind of organized approach that has won more races than any other thing.



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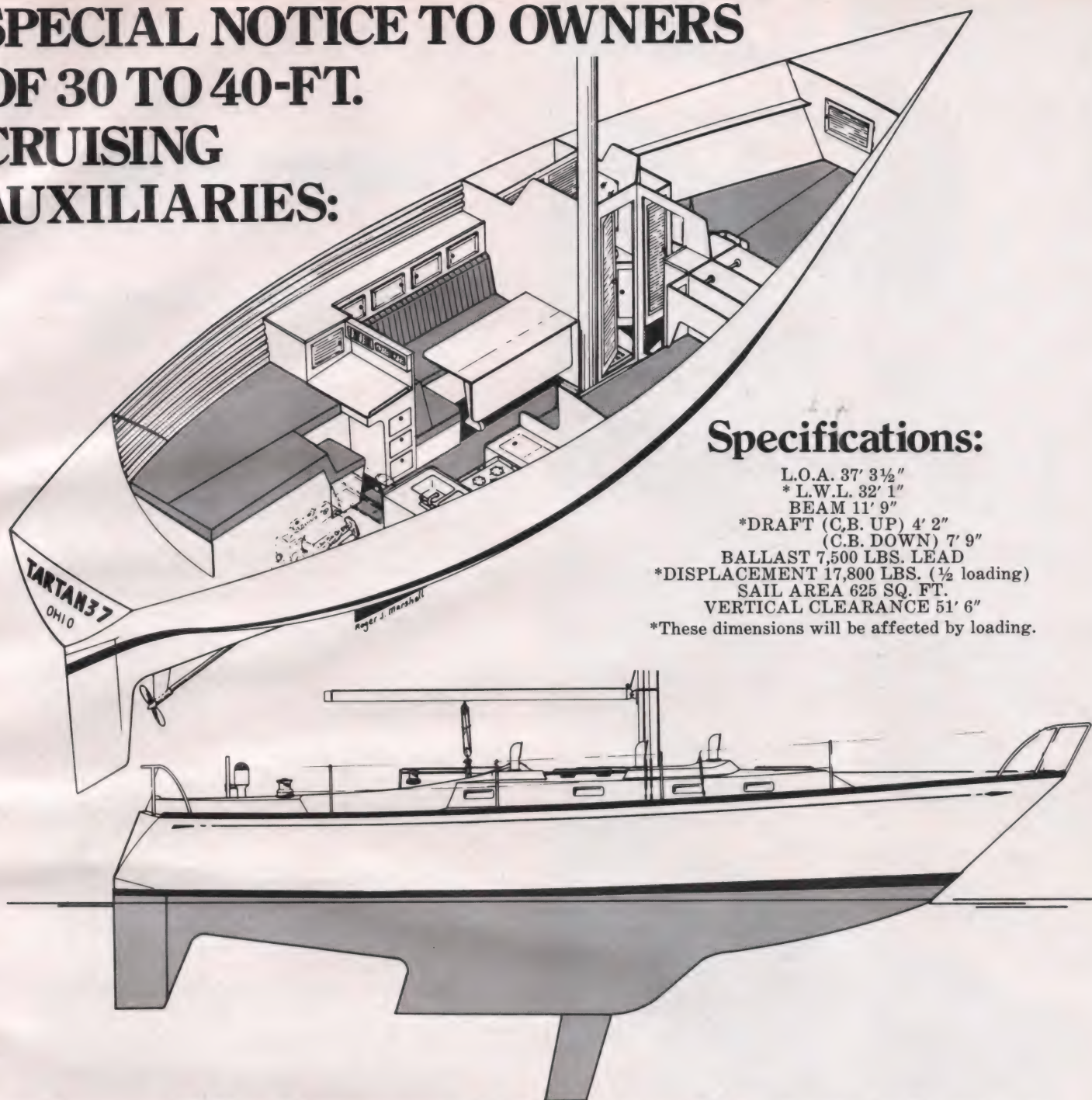
For a nice brochure on 32 feet of practical pleasure, write: Endeavour Yacht Corp., 11700 So. Belcher Rd., Largo, Florida 33504. Or have your dealer call John Brooks at 813/541-3553.

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## Keeping a Log

John Mellor details the reasons  
for maintaining proper notes

**T**here are many good reasons for taking the trouble to keep a log book at sea: to have a personal record of a cruise; a record to assist substantiation of possible insurance claims; a record of the boat's performance for tuning; and to have an account of attractions (or otherwise) of various harbors you have visited. A log can even be something to write in to reduce the boredom of a long, uneventful night watch.

Unquestionably, though, the most important purpose of the ship's log, as it is called, is to provide a full and accurate account of the ship's movements for navigation purposes. This is most important in small sailing boats where the basic navigation system usually consists of dead reckoning: a system that can be valid only if every miniscule alteration of course, speed, leeway and so on, is recorded faithfully. The log is the place to record these facts, not the chart.

The reason for that last sentence is simply that in a small boat sailing there often is not time to plot every course and speed change as it occurs. Thus it becomes particularly vital that everything be recorded fully in the log. Then, when the navigator has a quiet moment (lucky fellow), he can easily and accurately update his DR on the chart from the information in the log. This, of course, presupposes that he is on an open sea passage and well clear of any immediate dangers.

What should you record in the log? Well, the simple answer to that is—everything! But let's take a specimen page, as shown in Figure 1. Have a look at it, and see what should be there and why. But, first, remember that we are not in the Navy. Important though a navigational record may be, it makes for pretty dreary reading. We do sail after all, for the pleasure of it, and a part of this pleasure, to many of us, is being able to look back on the accounts of our cruises, not just to recall the time we altered course to 230 degrees in order to avoid a sperm whale, but also to recall the color of that whale, what it was doing at the time, the colors of the sunset, and the pleasures of that delightful little restaurant we visited at the last port of call.

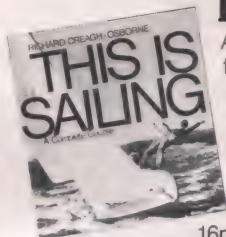
What I have always done is to divide the log into two parts. Taking facing pages, I always keep the left-hand side purely for details of weather, course-steered, distance run and so on. All neatly tabulated. All other "hand" information, such as course changes, sail changes, and so on, together with the times, go on the opposite side. I always like to keep the events, with their times, on the same line as the hour in which they occur and this can limit the space available for your chatty personal record.

I have always found sufficient space for brief notes and comments, but if you really like to ramble on, then you are probably better off with an entirely separate log book in which you can ramble to your heart's content without any fear of hiding any important navigational information. Or, if



# Volumes of information.

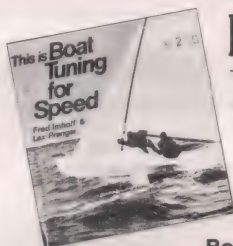
## Learn how to sail. **THIS IS SAILING** Creagh-Osborne



Acclaimed as the best book on small-boat sailing yet, **THIS IS SAILING** starts with the beginner and carefully guides him phase by phase to an advanced stage. Some 450 full-color, highly detailed drawings show techniques and theories while evoking a feel for on-board experience. Introduction to a Boat covers hull design, sail plans, bending on, sheeting, and the various components of a boat as wind machine. First Essential Skills takes over the helm on all points of sail, and features illuminating "stop-action" sequences on tacking and jibing. More Advanced Techniques goes on to spinnaker handling, heavy weather procedures, trapeze work and planing. Add safety, docking, knots, heaving to and other basics of seamanship, and you've got the whole gamut of wind, sea and sail—as clear as it's ever been made. In addition, three

16mm color/sound films, especially produced by SAIL, put each section of the book into dramatic practice, a combination that adds up to the most exciting and enticing how-to-sail group course available. Published by SAIL. Price: \$12.95, postage and handling \$1, total \$13.95.

## Learn how to sail even better. **THIS IS BOAT TUNING FOR SPEED** Imhoff & Pranger

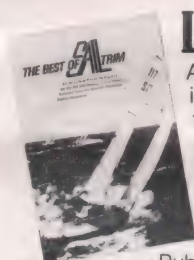


The natural sequel to **This Is Sailing**, and an expert manual in its own right for one-design sailors, SAIL uses a racing dinghy to teach the components of efficient sailing. The subject is approached in its broadest sense, covering such often-ignored speed essentials as bottom finish, windage, hull support, placement of fittings, analysis of sail faults and strategic application of the compass. Of course, the heart of tuning itself is carefully spelled out: mast position, rake and bend, rigging tension, jib leads, mainsail travelers and sheeting, and so forth. Again an abundance of detailed full-color illustrations leaves nothing to chance. In the shadowy area of boatspeed that separates sophisticated sailors from also-rans, **This Is**

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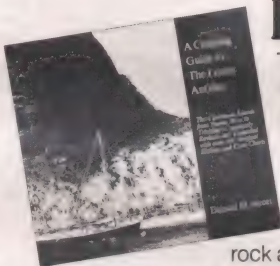
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## Learn where to sail. **A CRUISING GUIDE TO THE LESSER ANTILLES** Donald M. Street



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YACHT: PELORUS								AT: SEA	
DATE: 15 MAY 1976								FROM: BRIGHTSAIL TO: WESTERLY	
TIME	CTS	CMG	LEEWAY	LOG	DIST.	BAR	WIND	REMARKS	
0001	315	320	5° L	100.0					
0100	315	320	5° L	105.3	5.3	1018	NE 5	0035 c/c 355° log 3.1	
0200	355	360	5° L	110.1	4.8	1017	NE 5/6	0140 heave-to—double reef in main	
0300	355	355	10° L	114.3	4.2	1018	NE 6	0210 saw freighter 3 mi O45. Southwest light O80°	
0400	355	355	5° L	119.6	5.3	1019	NE 4	0315 shake out rolls	
0500	355	355	N/L	122.6	3.0	1019	NNE 9/1	0415 wind light, start motor 1500rpm. Take in jib	
0600	355	355	N/L	128.1	5.5	1019	NNE 9/1		
0700	355	355	N/L	133.7	5.6	1019	ESE 2	0630 wind increase to 12 knots. Stop motor. Set genoa.	
0800	355	360	N/L	138.7	5.0	1019	SE 3		
0900	360	005	5° L	144.9	6.2	1019½	SE 3/4	0815 c/c 360 log 140.1 0840 sailed past West Light—abeam to stbd. Log 142.8	
2359	205	200	5° R	210	6.1	1018	SE 4/5	2310 take in genoa and set staysail	
ENGINE HOURS: 2 1/4									
DISTANCE RUN: 110 N.M.								POSITION at 2359: 4 mi. SW of Great Island Light	

Figure 1: By taking a lined book and setting up your own system, you can personalize it to suit your own requirements.

you would rather keep it all in one book, you could use the next set of double pages for a personal record. That way, as long as you keep to one page per day, you can combine your rambling literary discourse with a clear, precise and uncluttered navigational record.

Before you ask, "Why not just go out and buy a ready-made log and fill it in?" there are several good reasons for not doing so. All sailors are individualists—it's one of the great attractions of the game—and not everyone will want, or need, to record quite the same information. An ocean-racing skipper will want a far terser and more technical account than the lone romantic; the motorboat skipper needs far more space for engine readings and so forth than the sailing man. And, perhaps most relevant of all, your idea of how you like to see the log displayed

can be very different from the makers of logbooks. These are all good reasons for getting yourself a plain stout bound book of lined paper and making up your own log.

The suggested layout I have shown in Figure 1 should give you a good basis from which to develop and modify to suit your own particular requirements. I prefer a double page for each complete period of 24 hours, followed by another double page, covering the same period for personal comments. The next two double pages cover the following day, and so on. This keeps everything clear and logical, extremely important points for the often tired, and maybe seasick navigator of the small sailing boat.

It is interesting to remember that the vast majority of navigational mistakes made in small boats are not errors of technique but simple sums added up

wrongly, information read off from the wrong place, information inserted in the wrong place, and so on. All are caused by those perennial bugaboos of the small-boat sailor: tiredness, seasickness, worry, and working in cramped conditions. The only solutions to these problems are simple, clear calculations. These begin with a simple, clear log.

At the top of the page we have the name of the boat, the date, where she is, or where she is travelling from and to. That sets the scene. A new date for every page prevents any possibility of mix-up, and we record those 24 hours, one hour per line, from midnight to midnight. It is all very clear and very logical.

Every hour I insert readings of all the things that concern me.

For a small sailing boat I would suggest the headings given in the



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This tribute is issued in a limited edition of 1,000 sets for the United States and is accompanied by a Certificate of Authenticity signed by the Chairman of Operation Sail 1976 Emil (Bus) Mosbacher, Jr. and numbered from 1 to 1000. Orders for this strictly limited edition will be fulfilled on a first-come first-served basis.

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diagram. CTS is the *course to steer*, the one the navigator has worked out. CMG is the *course made good*, the course the helmsman *actually* steers. Usually it is the same, but not always. In certain conditions—running and reaching in waves in particular—the boat has a tendency to veer from the course, and even the most experienced helmsman will have to admit that he has, in fact, averaged probably five degrees (maybe more) to one side of the ordered course. As long as it is honestly and accurately assessed and recorded in the log, it won't matter a bit. So we record it.

Leeway will vary with different courses and wind strengths, so it is a good idea to assess it by the hour and record it. And reading the log every hour, though not always necessary, does provide a nice ritual break from sitting and staring at the sea.

The same goes for the barometer reading and wind strength and direction. Many people record these perhaps once a watch, or even less frequently, but I like them hourly, for they give me a better picture of the general trend of the weather, in particular the rate of change of the barometer, which can be extremely important as an early warning of the approach of bad weather.

Another advantage of recording ev-

everything hourly is that it minimizes the chances of forgetting anything. A simple hourly ritual of "filling in the log" is bound to be more reliable than, "Have you filled in the log recently?"

All this information occupies the left-hand side of the page—a neatly tabulated record of navigational and weather information. What do we do with the right-hand side? Course alterations, fixes, sail changes, etc? In the example we see that at 0035 we altered course to 355 degrees (M); you will also note that we record the log reading at the time; it's most important for our DR track. At 0140 we hove-to and took two rolls in the mainsail; a glance at the wind column shows the increase that caused it.

At 0210 we took a visual bearing and recorded it, a useful check in case we happened to plot it on the chart incorrectly.

I also like to record brief details of weather forecasts, use of the engine, times of passing headlands, buoys, times of sighting land, lights, entering and leaving shipping lanes. In fact, I write down anything that might conceivably be of use to me in the safe and accurate navigation of my boat. And the log reading always is recorded with any position information such as headlands abeam or even the sighting of land or lights. It is surprising how

often it can be useful.

Finally, at the end of each 24-hour period, I record the engine hours run and the distance run. If I were making an ocean passage using astronomical navigation with sun sights, etc., it might be better to run each day from noon to noon so that the distance run at the bottom of each day's page could be compared directly with the run between noon sights. It's a matter of choice, but do keep it simple.

A navigational logbook. It's a joy to some, and a thorough bore to others. But it's a necessity of all of us who sail any farther than the harbor entrance. The more time and trouble we spend planning and preparing the book, the less time and trouble we have to spend filling it in. And the more use it will be to us when we really need it.

As I said at the outset, we all have our own ideas on what the book should look like, but I hope this example will help those of you who have not applied much thought to the matter to develop one that suits you best.

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## Steer by Sails

Mike Saunders takes another look at some sheet-steering systems

Once I was skippering a little 25-foot sloop up the English Channel to London, and the weather was not my only headache. The more serious problem lay in the main bunk, retching and groaning in moving tones. She was the owner of the boat, and had insisted on crewing on the trip to gain experience. Seasickness, however, had overwhelmed her early on, and it now was clear that, as far as I was concerned, this would be a solo voyage. During the entire trip she uttered only two sentences.

The first, as we crossed the bar, was, "Where is the nearest port?"

I named the nearest convenient port en route, (bearing in mind that the boat had no engine), about a third of the way to London.

The second, about 20 hours later, displayed remarkable recall of the previous conversation. "Where," she said, "is the nearest port?"

I sat in the exposed cockpit, shrinking into my oilskins from the wet and the cold like an aging tortoise, concentrating on the course, as far as the unnerving honking of ships in the fog would allow. It was quite obvious that this could not go on for the 36 hours or so it would take to reach port. Apart from anything else, I had to eat and navigate. The boat must be made to steer herself.

First, I tried lashing the helm, but the light little craft was as skittish as a half-broken filly. She wouldn't hold steady for a second. Next, I tried shockcord, but that was no better. Adjusting the sheets helped not at all. The trouble was that we were broad reaching, nearly quartering, and while I had often set up a well balanced boat to sail hard on the wind by herself, this was a most unsteady point of sailing.

### Braine Work

Clearly, the mainsheet had to be used to control the tiller somehow. I began fiddling around with the mainsheet and odd lead blocks, but my brain was functioning like congealed pudding.

"Come on brain, you toad!" I exhorted out loud.

Braine! That was the name of the self-steering device used on model yachts, I suddenly remembered. It consists of an aft-pointing tiller quadrant, with the mainsheet tied to one side, and a spring to the other. I set up a similar arrangement, leading the sheet through a block on the windward side, instead of using a quadrant; shock cord was used instead of a spring. The arrangement is shown in Figure 1.

But the boat still wouldn't hold course for more than a few moments, however much I adjusted things. There was only the jibsheet left to try.

By this time night had fallen. I was bone weary, and had lost hope of getting anything to work. I recalled meeting a yacht in Durban which had self-steered across the Indian Ocean, using the staysail sheet on the tiller, and several

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other long-distance voyagers have used a similar set-up.

In that strength of wind, the pull of the jib sheet was too great a force to go directly to the tiller. So I hitched a line at right angles to the jibsheet and led it to the tiller. Shockcord on the other side of the helm continued to balance the pull of the sheet. The arrangement is shown in Figure 2.

It worked! I waited anxiously for the inevitable luffing up, or bearing away, but the compass held steady. I hurriedly brewed a cup of coffee and darted out again. Still on course! To my astonishment and relief, the boat held her course right through the night, and through the following day, with only occasional adjustments. The most extraordinary aspect of this self-steering system was that it seemed hardly affected by changes in wind strength. Many of the self-steering gears I had used, even sophisticated production models, tend to alter course with variation in wind strength, as well as wind direction, and frequent adjustment is often required.

But with the sheet-to-tiller arrangement, the pressure of the sails and the helm seems to balance over a wide range of wind speeds. All that night and the next day the wind gradually died away, till we were stealing along at scarcely a knot. Yet the boat held true

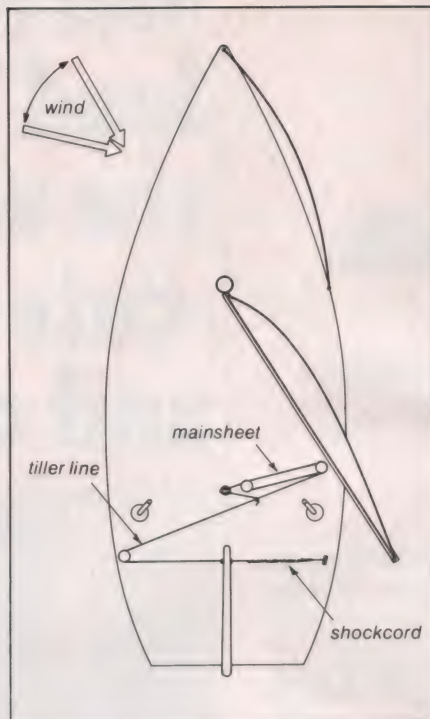


Figure 1: Tiller-sheeting arrangement for use on the wind

on her course, even when the jib was slatting about. How this worked, I do not know, but work it certainly did.

Over the following months I experimented with sheet-to-tiller self-steering arrangements, and discovered

that, in the main, two systems are required.

1. On the wind, the mainsheet works as in Figure 1.

2. Off the wind, the jibsheet is needed as in Figure 2.

At this point, John Letcher's book, *Self Steering for Sailing Craft* (International Marine Publishers, Co.), became available, and in it a number of things were explained. John Letcher had taken sheet-to-tiller self-steering systems a lot further, and both theory and practice are treated in detail in his excellent book. His system for downwind self-steering, when flying twin headsails, for example, is shown in Figure 3. Instead of fastening the sheets direct to the tiller, which is the usual practice, they are led through tiller blocks, and then to the winches; this makes for rapid and easy adjustment. When quartering, the weather sheet only is used, and balanced by elastic. One is then, in effect, back to system 2.

The most difficult course to steer is on a reach, when the weather helm is most severe. With the tiller hooked up to the mainsheet, the boat tries to insist on sailing a close reach. When the tiller is hooked to the jibsheet, the boat prefers a broad reach. I have found that the best system for reaching is to connect the staysail sheet to the tiller—if you have a staysail. If you haven't,

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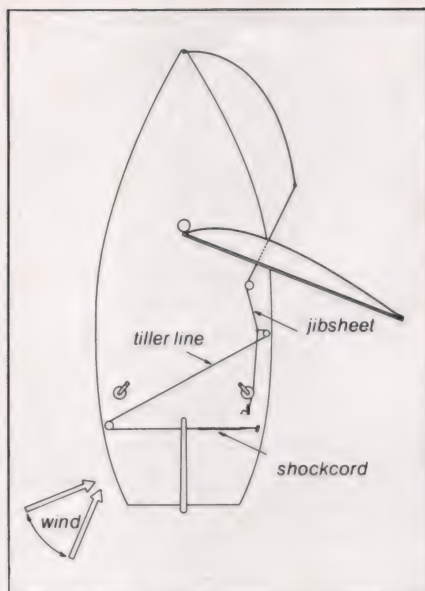


Figure 2: Tiller-sheeting arrangement for use off the wind

and the boat will not settle down on either system 1 or system 2, then use the system adopted by John Letcher. Here the jib is sheeted to the mainboom, and a tiller line is taken from the mainsheet, as in system 1. In this way, both the headsail and the main control the tiller together.

Incidentally, a two-masted rig presents no problems. The same sys-

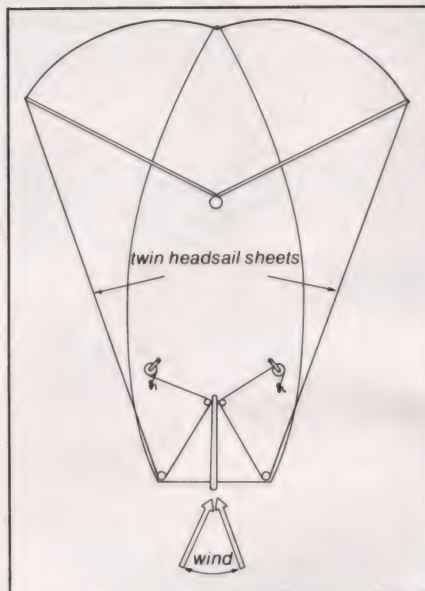


Figure 3: Tiller-sheeting arrangement for use downwind

tems can be used, and a ketch is generally easier to balance—at least on the wind.

#### Setting It Up

To set up these systems, only the simplest of gear is required: a few odd blocks, preferably with rope tails attached, so that they may be fixed anywhere, and a suitable elastic arrange-

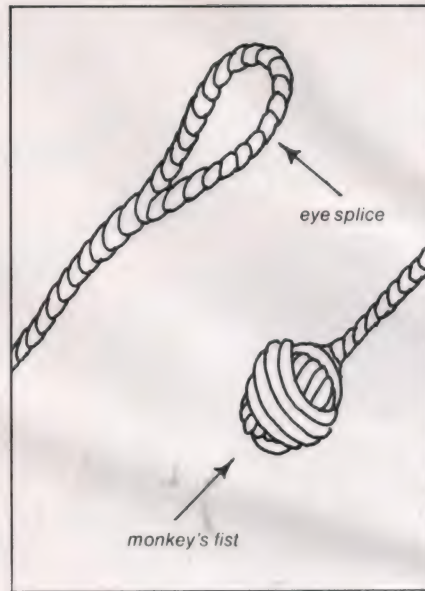
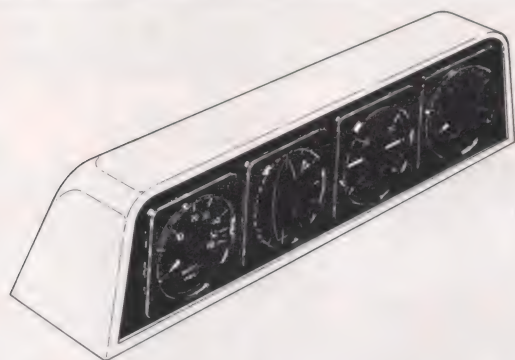


Figure 4: How to make a rope "snap shackle"

ment, and, of course, enough spare rope.

Adjustment is effected by means of a clove hitch on the tiller but the adjustment on the tiller line is critical; too strong, and she'll bear off, too weak, and she'll luff up. Having a little length adjustment on the elastic allows some variation. The elastic should just be slack when the tiller is a little to lee-



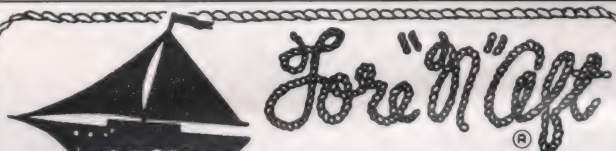
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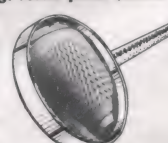
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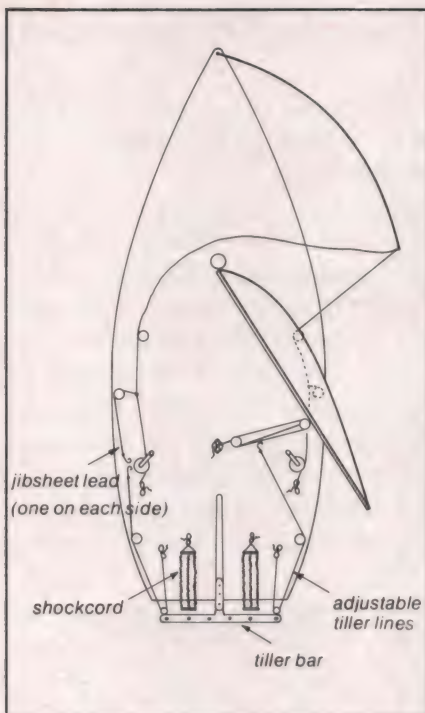


Figure 5: One possible permanent sheeting arrangement

ward. Consequently, the main adjustment to the elastic is its strength, and that is why a system using a number of rubber strands should be able to be used with a clamp; strands may be added or removed as required. Once the adjustments have been made for a particular course, little further attention should be necessary.

System 2 is similar in every way to that which I have described above, except that the tiller line is taken from the jibsheet. Again, the direct pull of the sheet can be too strong, and a tiller line, at an angle to the sheet, is used (Fig. 2). The tiller line may be fixed to the sheet at any convenient point between the clew and the fairlead, or between the fairlead and the winch, provided the latter two are not too close together.

Incidentally, wheel steering does not necessarily rule out sheet steering. I have used sheets tied to the spokes quite successfully, in cases where gearing is not too low, i.e., the movement of the wheel must not be too great, relative to the rudder, or the sheet will lose its horizontal pull. As a rule of thumb, if the boat can be steered satisfactorily on a quarter turn of the wheel, it also can be steered with sheets.

### Permanent Sheet to Tiller Steering?

Until recently, I have regarded sheet-to-tiller self-steering as a make-shift measure to be used when sailing shorthanded. Recently, however, I have come to think of it more and more as a permanent alternative to vane gear, especially when the owner is penurious, and the boat is small.

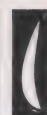
What are the advantages and disadvantages of the one system against the other. Much depends, of course, on the layout and geometry of the particular boat, but, in broad terms, the pros and cons can be summarized.

- Sheet-to-tiller systems are cheap and easy. For a few dollars you can buy the gear, and quickly set it up yourself.
- Before installing a permanent system, you can try it out. Many vane gears, on the other hand, do not work particularly well, for one reason or another, but this is not known until after the expensive installation has been completed. On small boats, and also on ketches, the siting of vane gears is often a problem.
- Sheet-to-tiller arrangements tend to be better helmsmen, in my experience, because they are less affected by wind strength than are vane gears. On the other hand, they are more difficult to set on a particular course often requiring tedious adjustment.
- The most serious drawback with sheet-to-tiller systems, is that they are cumbersome in use. Apart from the fiddling needed every time one tacks or alters course, you are forever tripping over lines that criss-cross the boat.

If you are installing a permanent system, however, the last-mentioned drawback can be mitigated, by carefully running tiller lines around, instead of across, the cockpit and side decks. Snap hooks, (for an all-rope snap hook, see Figure 4) for a quick changeover, with Clam cleats or with tiny snub winches for easy adjustment, also contribute to easy use.

One possible permanent installation is suggested in Figure 5. Here, tiller lines are taken from a tiller bar, so there are no ropes trailing across the boat. The tiller lines hook onto the main-sheet, or jibsheet as appropriate, using blocks instead of a rolling hitch. This allows you to adjust the sheets, without adjusting the knots. The length of tiller lines is adjusted on a cleat, after passing round blocks on the tiller bar. And the elastics are also controlled on a cleat.

There are, of course, any number of variations, limited only by the geometry of the particular boat, and by the ingenuity of the inventor. I have no doubt that many will be superior to the one shown in Figure 5. But all, I suspect, will be more cumbersome to use than a vane gear. If you are not prepared to pay this price for reliable simplicity, then sheet self-steering is not for you. If, however, either your budget or boat is small, and your ingenuity large, then you might like to have a go at it.



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# Sea Breezes

Colleen Leary tells how to forecast these sailors' delights

**O**f all the winds that influence coastal and inland sailing, the most important is the sea breeze. It transforms calm, hot summer mornings into cooler, breezier afternoons with perfect sailing conditions. The racing skipper who knows and watches for the local sea breeze has a tactical advantage, because a sudden wind shift usually marks its onset.

Sailors have known about the sea breeze for thousands of years, and scientists have understood its nature for hundreds. A sea breeze cannot set in unless the sea surface temperature is colder than the surface temperature of the land. The greater this temperature difference the more likely is a sea breeze to form and the harder it will blow. In winter in temperate latitudes (greater than 30 degrees) the land temperature seldom exceeds the water temperature, restricting the sea breeze to the warmer months.

Before sunrise on a clear day in the warm season, the land is cooler than the ocean. As the sun rises higher in the sky the land temperature increases much faster than the sea surface temperature and the temperature contrast needed for the sea breeze develops. When the sun heats the land, large blobs of warm air called *thermals* rise from the land surface and spread out aloft. This spreading of air aloft lowers the surface pressure over the land. Air near the surface then flows from higher pressure over the water to lower pressure over land. Aloft, a much weaker *return flow* carries the spreading air towards the water. Figure 1 shows a sketch of the complete sea-breeze circulation.

Your masthead telltale shows only the sea-to-land branch of the sea breeze. It varies in depth from 150 to 2,000 meters (500 to 6,600 feet) depending on location and time of year. Scientists first verified the existence of the upper return flow in 1879 with a balloon launched at Coney Island, New York. The two vertical branches of the circulation are too weak to measure directly, but visual clues call attention to them. When the air has enough moisture, fair weather cumulus

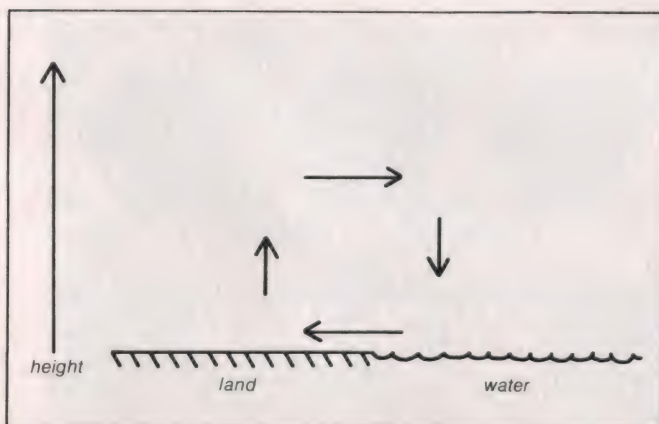


Figure 1: The sea-breeze circulation

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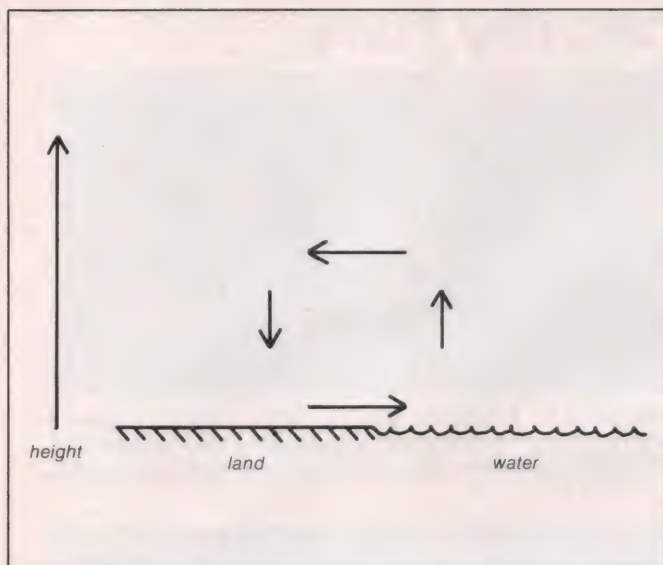


Figure 2: The land-breeze circulation

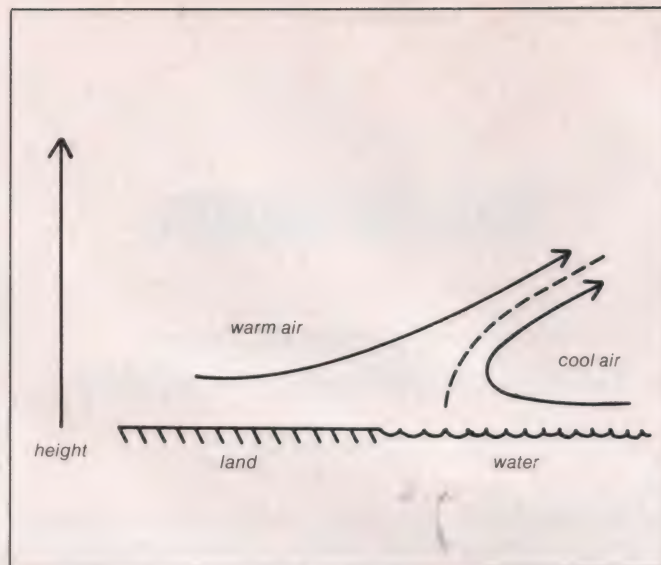


Figure 3: The broken line shows the seabreeze front

clouds form on the rising air currents over land. Once the sea breeze sets in, a line of cumulus clouds often marks the coastline. Over the water, the downward branch of the sea-breeze circulation suppresses cloud development and gives the clear sky there a hazy appearance.

The sea breeze generally reaches a peak speed of 10 to 15 knots early in the afternoon. By that time, the sea

breeze has spread inland 15 to 50 kilometers (eight to 27 nautical miles) and seaward a somewhat shorter distance. Later in the day, as the sun sets and the land cools, the sea breeze dies away. In the evening, when the land temperature cools below the sea surface temperature, a reverse wind flow, called the *land breeze*, takes over as the dominant local wind. Figure 2 shows a sketch of the land-breeze circulation.

The land breeze is much weaker than the sea breeze, usually less than 10 knots, because the stability of the air increases at night and discourages convection. Thermals and cumulus clouds, features of the daytime sea breeze, are not present at night to assist the land breeze.

Local winds seldom form entirely independent of the large-scale weather pattern. Different large-scale wind pat-

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terns cause variations in the sea-breeze circulation described above. When the large-scale wind blows offshore, that is, from land to sea, it changes the character of the sea breeze in two ways. First, it delays the onset of the sea breeze for several hours, until the temperature contrast between land and sea can produce a local sea breeze strong enough to overcome the opposing large-scale wind. In some places, this does not occur until evening, when a nighttime sea breeze begins to blow. If the offshore wind is strong enough (15 knots or more) it prevents the sea breeze from forming at all.

Second, a zone marking the line where the onshore and offshore wind systems converge, called a *sea-breeze front*, frequently forms (Figure 3). The sea-breeze front moves landward like a cold front, replacing warmer air ahead of it with cooler maritime air. The front advances at speeds ranging from one to five knots. At the sea-breeze front lies a zone of calm where the converging air masses ascend, giving rise to cumulus clouds and often showers and thunderstorms.

When the large-scale wind already blows onshore, local heating of the land produces a sea breeze that reinforces the large-scale wind flow. If the large-scale wind blows onshore with a

component parallel to the shore, the sea breeze diverts the wind to a direction more nearly onshore. When a weak large-scale wind blows parallel to the shore, a sea-breeze front develops. When a somewhat stronger large-scale wind blows parallel to the coast, it shifts to a more onshore direction and strengthens as the sea-breeze circulation develops. Sea breezes vary from one part of the world to another. In middle latitudes sea breeze fronts occur most often on coasts that face eastward, because prevailing large-scale winds are offshore westerlies. In the tropics, sea breezes are usually stronger and deeper than in higher latitudes because land-sea temperature contrasts are greater in the tropics, and large-scale winds are generally weaker there.

Topography and ground cover also influence sea and land breezes. Hills or mountains oriented parallel to the coast reinforce the sea and land breezes because these topographic features themselves generate local winds. Mountain winds blow down-slope at night to reinforce the land breeze, and upslope during the day to reinforce the sea breeze. Ground cover limits the heating of the land which sets the sea breeze in motion. Forested terrain doesn't heat as fast as sand or concrete and cement.

Beaches and cities generate stronger sea breezes faster than forests.

Lakes and wide rivers also generate local onshore and offshore local winds such as land and sea breezes. These are not so strong as sea breezes, except for large lakes such as the Great Lakes.

The earth's rotation does not influence the formation of sea breezes, because they are local winds. After a period of several hours, though, the sea breeze changes direction in a veering (clockwise) sense to have a component along the shore. In some areas this eventually results in a sea breeze nearly parallel to the shore.

Forecasting the sea breeze requires a knowledge of the shape of the local coastline, the sea surface temperature, the land temperature, and the prevailing large-scale winds. Extensive cloudiness hinders the local surface heating necessary for a sea breeze. If clouds (except fair-weather cumulus) cover more than 50 percent of the sky, expect no sea breeze until clearer weather prevails. This rule does not apply to morning fog and stratus, which frequently dissipate, leaving a perfect sea-breeze day.



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# Tall Ships

*a scene from the past  
a spectacle of the present*

by Jeff Spranger

photographs by Stanley Rosenfeld

Slowly, almost ponderously, the full-rigged ship rolls through gray seas. Aloft amid myriad lines and tackle her beige-gray sails heave and sigh as her tall rig sweeps the sky in tune with the rolling hull below. The figures of her crew scurry up and down ratlines, fold themselves over her yards, or brace themselves on deck, their eyes aloft, awaiting commands to haul or trim.

A scene from the past or a spectacle of the present?

The answer is both, as past and present unite in the parade of ships, the largest fleet of sailing ships to come together since steam power replaced sail power a century ago.

If anyone were to conceive of an event wholly appropriate to commemorate the bicentennial anniversary of America, he would be hard-pressed to match the magnitude or impressiveness of a flotilla of ships from a bygone era. The sailing ship has been so much a part of the American heritage, bringing her first explorers, then her settlers, eventually the immigrants to her shores, to a country that was to depend so much on ships for her development both economically and culturally.

Full-rigged ships, packets, pilot cutters, coasters, whalers, traders, schooners, yachts—a large percentage of the world's remaining craft from the great days of sail have gathered for a tribute to this country as well, in a real way, to themselves and to seafaring as a way of life. It is an armada of more than 200 ships from upwards of 20 countries including 17 of the largest sailing ships afloat today, several of them among the largest ever built, plus smaller craft designed and built for trade, fishing, research, education. Aboard them are 30,000 cadets, crewmembers, and officers.

Few of these vessels continue to do the work for which they were originally built. Within the last 100 years the development of steamships virtually wiped out the commercial sailing craft with its uncertain pace, economical inefficiency, and constant risk to crewmembers.

Yet more than half of the ships involved in Operation Sail now serve a function as meaningful as any for which they were originally designed and built. These ships are training ships for youngsters from all over the world,



whether coast guard, merchant marine, and naval cadets, or merely youth seeking the experience and toughening an interlude at sea can impart.

Some of the other ships are charter boats paying their way by giving modern generations a glimpse of the seafaring life of the past. And others are engaged in research or in promoting environmental concern, the old working to study the oceans of today and preserve them for the future.

The tall ships activities began in Plymouth, England, on May 2 with the start of a transatlantic race that finishes in Newport, Rhode Island. There the crews have two days of inter-ship competition before cruising-in-company to New York.

On July 4 the spectacle reaches a climax with the parade of tall ships through New York Harbor in Operation Sail 1976. As many as 200 ships make their way under sail among moored naval vessels from 30 nations on hand for the International Naval Review, surrounded by spectator craft that may number close to 10,000, and viewed by as many as five million people with vantage points in buildings and on the shores of New Jersey, Staten Island, Brooklyn, and Manhattan.

The actual parade begins at 1100 July 4 as the fleet rendezvous in lower New York Harbor and, led by the Coast Guard barque *Eagle* as host ship, the ships proceed under the Verrazano Bridge north through the harbor, into the Hudson River and beneath the George Washington Bridge to the turning area off the northern end of Manhattan Island.

Astern of *Eagle* are the tall ships, one after the other—among them the elegant *Gorch Fock*, the huge *Kruzenshtern*, the distinctive *Amerigo Vespucci* and *Sagres* with her red-crossed sails—making their way slowly upstream. The smaller vessels follow, making a line of sails stretching the 20 miles of the parade route, a scene that few witnesses will ever forget whether they are on hand or view it from a distance via television or photographs.

Expectations of the numbers of small spectator craft on hand in New York Harbor to view the parade of ships on July 4 has resulted in extraordinary regulations. Much of New York Harbor has been closed to commercial marine traffic and anchorages are restricted July 2-5. No vessels are permitted to anchor outside designated anchorage areas although on July 4 spectator craft are free to move at a maximum speed of eight knots except within the 400-

yard-wide parade route from the Verrazano Bridge and in the turning area north to the Spuyten Duyvil Bridge.

Special anchorages limited to vessels over 100 feet by permit and anchorages for smaller vessels on a first come, first serve basis without a permit have been designated. During the parade spectator craft may position themselves among the anchored naval ships on July 4. Special anchorages in Gravesend and Sandy Hook Bays for vessels participating in Operation Sail are also restricted.

More than 80 Coast Guard and CG Auxiliary vessels have been assigned patrol duties. However, the size of the spectator fleet precludes the Coast Guard's coming to the aid of mishaps or breakdowns other than those that pose a danger. Spectator craft have been asked to render assistance to routine difficulties to free patrol craft for the more demanding task of keeping the parade route clear and answering emergency situations. Officials have also cautioned skippers of spectator craft to be particularly observant of fuel consumption.

Clearly, the small craft congestion coupled with the presence of a large number of moored ships, tall ships with limited maneuverability, and waters roiled by strong tidal flow and the wash of moving boats behooves the skippers of spectator craft to check the condition of their craft, their safety equipment, and their boat-handling skill.

For spectators on hand for the salute or viewing from afar the 17 tall ships are the focus of attention. Magnificent in their dimensions and majestic in their grace, they dominate the scene.

Host ship for Operation Sail 1976 is the US Coast Guard training ship *Eagle*, a 295-foot barque that has become a familiar sight with her cadet crew during annual summer voyages.

*Eagle*, a sistership of the German tall ship *Gorch Fock*, the Russian *Tovarishch*, the Portuguese *Sagres II*, and the Polish *Dar Pomorza*, was acquired from Germany as part of World War II reparations. Formerly the *Horst Wessel*, a German training vessel, *Eagle* became American despite a drawing that gave her to Russia.

Shrewd as a Yankee trader, Lt. Robert Canby talked his Russian counterpart at the drawing into swapping *Horst Wessel* for a pair of undistinguished German merchant ships, basing his persuasion on the notion that with more people to train Russia would be twice as well off with two ships as with one. The Russian, who unlike

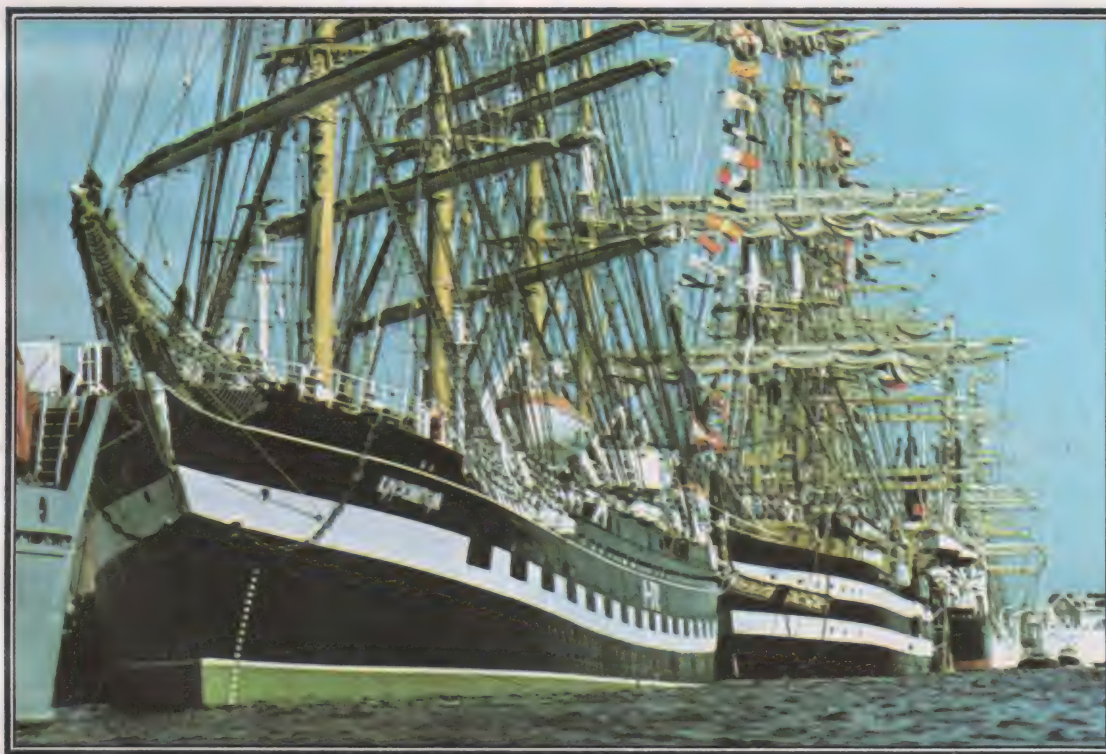


*Dar Pomorza full and by*





*Cadets go aloft at dockside as well as at sea*



Keith Taylor

*Tall ships line the docks for public visits*



Canby had not examined the war prizes, and was thus unable to distinguish between quality and quantity, agreed, the drawn slips were exchanged under the table and *Eagle* became the foremost tall ship in the United States.

While *Eagle*, her white hull emblazoned with the red-orange stripe characteristic of Coast Guard vessels, acts as host, the ship most likely to evoke comment is the gigantic Russian training ship *Kruzenshtern*, 375 feet long, her topsides black with a distinctive fore and aft white stripe broken by black ports.

Originally, *Kruzenshtern* was named *Padua*, one of the famous Flying P ships built by the Germans around the turn of the century for the Chilean nitrate trade and thus designed and built for rounding Cape Horn. She is the sistership of another Flying P ship, the *Peking*, which is being restored at South Street Marine Museum after having been towed across the Atlantic. Now the *Kruzenshtern* is a training ship for the Russian fishing fleet.

For many the most handsome of the tall ships is the 205-foot Norwegian training ship *Christan Radich*. A visitor on several occasions to the United States since she

was built in 1927, the *Radich* has had considerable success in previous tall ship races.

Unlike most of the largest training ships that are government-owned and used to train military personnel, the *Radich* is privately owned and was built intentionally as a training ship. In recent years she has been financed by a grant from the Norwegian government as she takes three-month training cruises with 88 cadets, most of them preparing to enter the Norwegian merchant marine.

While there are tall ships from 36 nations sailing as part of Operation Sail 1976, Germany, perhaps more than any other country in the world, has understood the merits of sail training and a massive program of building training ships and manning them with young sailors. The German *Gorch Fock*, the latest built (1958) of the four sister training ships taking part in Operation Sail 1976, gets her name from the penname of the German sailor-poet Johhan Kinau, killed aboard a cruiser at the battle of Jutland.

As a unit of the Federal Republic's Navy, *Gorch Fock* has had a great deal of success in previous sail training races. A fast ship, she has reached speeds of 16 knots under sail, remarkable when one considers the fact that



*Ships' stores heap deck of Phoenix on eve of transatlantic race*



*The Irish Phoenix heads to sea and America*



*Reflections in calm waters of Plymouth Harbour*

Robert Foley



sail training ships seldom enter the high latitudes where strong continuous winds foster sustained speeds and long day's runs.

Apart from *Eagle* the tall ship most familiar to Americans is likely to be the 252-foot *Danmark*. Visiting Jacksonville in 1940 when the Nazis occupied Denmark, her officers and crew were looked after by Jacksonville residents until, when the United States declared war in December 1941, she was made available for training Coast Guard officers, some 5,000, before the end of the war in 1945. The captain remained Knud L. Hansen, the Dane who was to be *Danmark's* skipper for 25 years, which for the captaincy of the same ship must be something of a record.

The *Danmark's* return to Denmark in 1945 was an emotional one, and the following year she was again in service cruising with Danish merchant marine cadets, in keeping with the then Danish law that all ship's officers receive part of their training on a sailing ship. Now the boys themselves pay a token amount for their keep aboard, although the ship is financed largely by shipowners and a government grant.

While much of the attention will, of course, fall on the largest ships, many of the not-so-tall ships have backgrounds to fit their distinctive appearance.

- *Gazela Primero*, the 190-foot barkentine that as recently as 1958 was a Portuguese fishing vessel working the North Atlantic and is now a training vessel operated by the Philadelphia Maritime Museum.

- *Bluenose II*, a full-sized replica of her namesake, the Grand Banks fishing schooner and successful defender in the International Fisherman Trophy races in the '20s

and '30s; now owned by the Canadian Province of Nova Scotia and promoting tourism.

- *Unicorn*, once a Baltic Sea Trader, re-rigged as a brig, recently refurbished, and now crewed by ex-juvenile offenders from Florida Ocean Sciences Institute, a privately operated corrections program.

- *Shenandoah*, *Bill of Rights*, *Harvey Gamage* and *Effie Morrissey*, New England charter and training schooners.

- *America*, full-sized replica of the mid-19th century schooner that demonstrated American sailing craft supremacy in England and in doing so gave her name to a trophy she won and to the most famous sailing competition in the world.

- *Sir Winston Churchill*, the sail training schooner from England, and *Westward*, an educational/research top-sail schooner from the United States, both ships manned by complete girl crews.

While nothing in the plethora of bicentennial activities throughout the United States promises anything like the spectacle of the parade of ships in New York Harbor July 3-5, the parade is only one part of the schedule of events involving these ships.

The Sail Training Association arrives in the United States via the three-legged transatlantic International Sail Training Races that started in Plymouth, May 2, with passages from Plymouth to Tenerife in the Canary Islands, another 2530-mile leg from Tenerife to Bermuda where many of the United States and South American participants join the fleet, and finally from Bermuda to Newport, Rhode Island. For ships joining the fleet in Newport there is a 310-mile coastwise race through Long Island Sound and Buzzards Bay starting June 21.

Christian Radich's cadets crowd foredeck





In Newport the sail training vessels rendezvous from June 27 to July 1, an international gathering of the officers, crews, and cadets manning STA ships hosted by the American Sail Training Association.

While in Newport many of the ships are slated to be open for public visiting while their crews participate in inter-ship sporting events, dine with local families, and visit nearby tourist attractions such as the Newport mansions and Mystic Seaport.

A symposium on training ship involvement in marine ecology, a military tattoo each evening, and a tall ships ball, trophy award ceremonies, and an ecumenical church service are also on the agenda. Moreover, on June 30 the fleet is to be reviewed with each ship dressed and the crews manning the yards. The captains have also been requested to light their ships each night in port.

Following their stay in Newport, the ships cruise in company to the climactic gathering in New York Harbor, the tall ships making their way outside of Long Island because of the limiting clearance under East River bridges, and the smaller ships by way of Long Island Sound with overnight stops in ports along the way.

At the conclusion of the July 4 parade many of the ships have berths along New York and New Jersey docks where they are available for public inspection while their officers and crews attend receptions and go sightseeing.

After the festivities in New York, the huge fleet disperses to visit many of the seaports on the eastern seaboard including Baltimore, Philadelphia, and Boston. In each port of call they are to take part in local bicentennial celebrations as well as exchanges of international goodwill. Finally, the Sail Training Association has a race from Boston back to Plymouth starting July 15.

The bicentennial salute of sailing ships, the 1976 gathering of sail training craft, the visits to let so many celebrating Americans see the ships and meet their crews, and the work of Operation Sail 1976 and the Sail

Training and American Sail Training Associations will be over.

Yet the ships will go on, continuing to give the youth of many nations a feel for the sea and the experience of handling a ship under sail, continuing to conduct marine research and education, continuing to provide charterers with a glimpse of seafaring, continuing to make the world aware of the need to protect and preserve clean oceans and marine life, and continuing to make all who sail abroad or view them sense the heritage to which all peoples are a part, the heritage of the sea.

Someday a few years hence the tall ships will gather again, perhaps not in the numbers of Operation Sail 1976, but in numbers that will show the peoples of the world that political and geographical differences notwithstanding, they share an interest in the sea and an unanimity with those who sail on it.




*A schooner's schooner, the Swedish Gladen*



*In Plymouth Harbour Class B1 ships are dwarfed by tall ships*





# A Parade of Tall Ships

## ***Eagle***

US (Coast Guard) training ship  
LOA 295'  
Rig three-masted barque  
Complement 189 (inc. 135 cadets)

## ***Sagres***

Portuguese naval training ship  
LOA 321'  
Rig barque  
Complement 290 (inc. 130 cadets)

## ***Gorch Fock***

German naval training ship  
LOA 285'  
Rig barque  
Complement 173 (inc. 100 cadets)

## ***Kruzenshtern***

Russian training ship  
LOA 378'  
Rig four-masted barque  
Complement 236 (inc. 160 cadets)

## ***Tovarishch***

Russian training ship  
LOA 270'  
Rig three-masted barque  
Complement 176 (inc. 130 cadets)

## ***Nippon Maru***

Japanese training ship  
LOA 320'  
Rig four-masted barque  
Complement 150 (inc. 120 cadets)

*Gorch Fock*





*Kruzenshtern*

### ***Gazela Primeiro***

US museum historical/training ship  
LOA 199'  
Rig three-masted barque  
Complement 55 (inc. 30 cadets)

### ***Gloria***

Columbian training ship  
LOA 212'  
Rig barque  
Complement 145 (inc. 60 cadets)

### ***Amerigo Vespucci***

Italian training ship  
LOA 330'  
Rig full  
Complement 500 (inc. 150 midshipmen)

### ***Juan Sebastian de Elcano***

Spanish training ship  
LOA 352'  
Rig four-masted topsail schooner  
Complement 407 (inc. 210 cadets)

### ***Danmark***

Danish training ship  
LOA 253'  
Rig full  
Complement 104 (inc. 88 trainees)

### ***Dar Pomorza***

Polish merchant marine training ship  
LOA 291'  
Rig full  
Complement 192 (inc. 120 cadets)

### ***Libertad***

Argentinian training ship  
LOA 345'  
Rig frigate  
Complement 245 (inc. 120 cadets)

### ***Mircea***

Romanian training ship  
LOA 270'  
Rig barque  
Complement 187 (inc. 120 cadets)

### ***Esmeralda***

Chilean naval training ship  
LOA 353'  
Rig four-masted barque  
Complement 337 (inc. 170 trainees)

### ***Christian Radich***

Norwegian training ship  
LOA 241'  
Rig full  
Complement 104 (inc. 88 trainees)



*Christian Radich*





*Juan Sebastian de Elcano*



*Sagres*



*Nippon Maru*



*Eagle*



# Sail Training

## *youngsters go to sea to find the world*

by Patience Wales

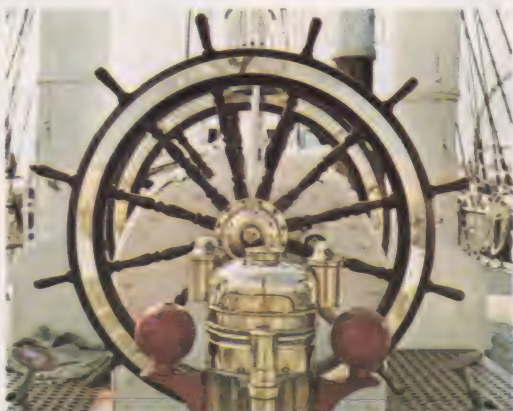
photographs by Roy Attaway, Bill Bacon and Joe Feinblatt

**D**anger. Climb the rigging of a tall ship; lie with your belly draped over a yard; squint down at the world at your feet. It's awesome; it's dangerous. And therein lies much of the kick of going to sea to go to school. It's different from the danger inherent on board a roller coaster or driving too fast on a country road at night; those are thrills.

The danger that is nailed and stitched and pounded through the hull and rigging of a big sailing ship at sea is serious; it is part of the job; it can't be avoided.

Stephen Paulus is 19. He spent seven months as a student/cadet on board the 316-foot three-masted Norwegian bark, the *Statsraad Lehmkuhl*. When his watch was sent aloft to hand the lower course, say, he ran up the rigging. He got so he could run up the rigging pretty quickly too. Helping to square away that part of the huge ship became for Paulus the greatest pleasure. To become really good at something that involves danger, dexterity and a kind of integrated motion made him see self-discipline as a sort of secret weapon, the thing he could count on, no matter what, and the quality that could help him deal with the danger.

Bill Beavis has knocked around on big ships for years. He points out that the feelings Paulus came to recognize are the essence of the concept of sail training. "You just can't do your own thing in a big sailing ship; if you do nothing works, and no matter how individual a boy or



girl may be, however non-conformist, wild or adventurous, how much an outlaw ... he or she soon learns that he or she can do nothing alone. A sailor can't reef a sail alone, can't brace a yard, heave a halyard, hand a sail ... nothing. In fact, within this strange machinery a new cadet feels lost and bewildered, humiliated even.

Then he or she discovers the strength of the team."

Aboard the *Statsraad Lehmkuhl* the students got up at six and they swabbed decks and polished brass and cleaned heads and some of them hated it—hated the having to and the hardship and the repetitive business of running a big ship. To the Norwegian professional crew these cadets were incomprehensible. The ship was what mattered. Sailors did what had to be done and that was that. To mind doing something wasn't part of the makeup of a sailor. Paulus liked the responsibility of his duties, the familiarity of the routine, and he was part of the majority of student cadets who did become "sailors," who were recognized by the professionals as being the cogs they could depend on to click click in the machinery of the ship.

And of course to these students the ship became the thing they could depend on. They sailed from Bergen, Norway, through the Bay of Biscay to the Canary Islands and then south-east to Gambia in West Africa.

In Gambia the ship split into two groups, one group to go ashore on field trips to the interior





*The Statsraad Lehmkuhl carries 22 sails on 180-foot-high masts . . . 28 professional officers and crew, all Scandinavian, have forsaken higher wages to sail on the 316-foot training ship . . . to supervise 70 students/cadets, including 15 girls . . . and to turn them into sailors . . .*



for a week while the others, Paulus' group, worked on board to scrape rust and paint the hull and masts. Then the two groups switched. After Paulus' group was finished working for the day they would go ashore to the city of Bathurst to visit shops and the market. What Paulus remembers being there all the time is the ship, her tall masts always visible, her bulk a kind of home that became a special pride to him. She became *his* ship. He had invested energy and fondness in her and she gave him back a sense of its being worth it. When Paulus' group returned from their trek into the interior of Gambia the *Statsraad Lehmkuhl* was all painted and white in the African sun and she was beautiful to him. He has never seen another ship so beautiful.

Years ago sail training prepared young men for a naval career. As Bill Beavis points out, the concept has changed. Something like 87 vessels from 23 nations are out on the water with thousands of young people aboard. Many of

the ships built within the last 10 years are designed to take a cross-section of boys and girls and to give them courses in adventure and character training—these are “school” ships only in a psychological sense. Some of these sailors are sent to sea by their employers who have to pay \$260 to send them on a two-week cruise aboard a Sail Training Association schooner. It's a sort of investment, it seems, since many employers have permanently booked berths.

Beavis sat in on an interview between the captain of one of these schooners and a “new boy.”

“I see you come down ladders backwards,” remarked the captain, looking up to see what had caused all the clatter on the two-step entry to his office. “Now, what prompted you to do that?”

“It was something I picked up the last time I was at sea,” the boy replied with some confidence.

*You just can't do your own thing in a big sailing ship. . . . A sailor can't reef a sail alone, can't brace a yard, heave a halyard, hand a sail. . . nothing. In fact, within this strange machinery a new cadet feels lost and bewildered, humiliated even. Then he or she discovers the strength of the team. . . .*



















*The Oceanics School of New York is the only school of its kind with a square-rigged sailing vessel as its campus . . . Oceanics mixes work and study with visits to foreign ports . . . In addition to their normal class loads, all students do their share of ship's work . . .*





... the Statsraad Lehmkuhl was the world for 100 people . . . they formed their own society, as interdependent and layered as any cut-off tribe. . . .

---

"Oh, you have been to sea before?"

"Yes sir; I was on a trawler before I broke my arm."

"And how did you do that?"

"Fell off a ladder coming down frontwards, sir."

The *Statsraad Lehmkuhl* is run by Oceanics School of New York, a conventional high school for students between the ages of 14 and 20—conventional other than its "campus," a three-masted square-rigged ship. Oceanics mixes work and study as well as social classes, nationalities and backgrounds. The *Statsraad* was built in 1916 in Bremerhaven, Germany, of wrought iron with masts and yardarms of steel. She is equipped with the most modern navigational aids and has a 400-horsepower diesel engine. She carries 22 sails on 180-foot-high masts. Her beam is 41 feet and her draft 17. At 316 feet she is one of the largest training ships afloat.

Paulus liked the professional crew, particularly the sailing master. "He was a real sailor. He wouldn't be a captain because he didn't want the paper work. But to see his face when we hoisted all the sails. . . . He knew stories . . . he'd been everywhere . . . when we'd pull into a port he'd been there in a banana boat in 1923, or he could point out where a cafe had been 30 years before."

"When we first went aboard the ship," Paulus said, "we were scared of the Norwegians [the 28 professional officers and crew]. We called everybody 'sir,' even the mess boys, but in the end we were shipmates with the crew."

And as certain teachers, officers and crewmen stand out aboard sail training ships, so eventually do certain cadets. But in the beginning everyone looks the same. Bill Beavis tells about the time he was one of four watch officers on a Sail Training Association schooner. "The three of them and me all slept together in a shoe box back aft, but so that we could be properly identified there was a plan containing our names and locations pinned up in the messroom above. It was supposed to help the boys find us in the dark but amongst us it promoted a curious sensation. Seeing ourselves so neatly labelled and laid out was rather like coming across your own name in a Chapel of Rest. It didn't help the boys much either. By the time they had studied the plan, come down

the ladder and turned around, port changed over to starboard; and we must have all looked the same in the dark anyway.

The only boy that I found hard to forgive was the one who returned 20 minutes later after he had called me late for the wrong watch.

"Excuse me, pilot, you remember I came down to tell you it was your watch and you said it wasn't?"

"Yes," I answered sleepily.

"You were right. I'm sorry."

Although the danger inherent in sailing a ship at sea is part of the "pleasure," after a while for Paulus the danger became personal, not just an abstract knowledge. When the *Statsraad* first entered the Bay of Biscay on December 24, she sailed into what the sailing master called the worst storm he'd been in in 60 years. Yet Paulus wasn't afraid. The green (in more ways than one) cadets were taken off watch, were not allowed in the rigging; lifelines were rigged; and the mizzen staysail and main-topmast-staysail blew out like exploding bombs in the sky. To the young cadets this was all just an exciting adventure. They were too naive, simply too dumb to know enough to be afraid. But later Paulus learned what to be afraid of. When his foot slipped as he was running up a ratline and he almost fell to the steel deck below, his heart slipped too. He learned that the jobs that seemed merely compulsive were necessary. Well-furled sails don't come undone in gales; paint and putty aren't just cosmetic—they protect and preserve the ship. And the abstract became alive.

A ship like the *Statsraad Lehmkuhl* is the world for 100 people who spend seven months together and in such an environment they formed their own society, as interdependent and layered as any cut-off tribe. Sometimes morale was bad; sometimes the tension was almost unbearable; sometimes every one of the cadets wanted to get off the ship. But a few months after they had all split and returned to their larger lives, Paulus spoke to some of the most intense malcontents. "They all wanted to go back to the ship," he said.

They had helped to make it work, this electric thing that is a big sailing ship, and they didn't know until later what she had given back to them, how she had lit up their lives.





# Readying for Sea

*at one with the past*

story and photographs by George Nichols

As the tall ships sail into US waters few viewers are aware of the preparations necessary to make the ships fit for sea. A realization of the immensity as well as the satisfaction of the task of outfitting a full-rigged ship may dimly be wondered at but quickly lost, replaced by the sense of awe that the sight of such ships inevitably evokes.

Yet as I sit here in Greece, taking a moment's reflection before another long day of fitting out the 125-foot *Regina Maris* for sea, for the transatlantic tall ship's race and the festivities in America, I sense deeply not only what the officers and crew of the other tall ships are undergoing but also what not so long ago was a way of life for the thousands of world's sailors who made the sea and the ships that sailed it their way of life.

Whether Greece, Italy, a harbor on the Baltic, a seaport on the East Coast of the United States, whether Lisbon, Buenos Aires, or Plymouth, the scene and the labor are the same. As with the location, the language and the difficulties may differ but the young men and women are essentially alike as are their tasks, and most important, the dedication they have to skills and knowledge that may seem arcane to modern eyes but to those involved are as relevant as life itself.

This morning Pasolimou is quiet, the still forms of the giant yachts—*Creole*, *Marala*, *Eros*, *Doxa*, *Paloma*, and the rest—are reflected in the quiet water, sheltered from the gentle northwest wind by the apartment buildings and stores which ring the harbor's basin. Only the tiny fishing boats—open one-man skiffs pushed by one-cylinder engines, the oars kept trailing overside at all times—are moving, the *pop-pop-pop* of their engines seeming over-loud in the sunrise calm. *Regina* herself is quiet, although the occasional clatter of pots in the galley and the sound of voices in the mess indicate that the cook is already at work. The crew is



While Jerry, the sailmaker, made a few needed minor repairs, each sail was moved aloft

coming to life for a new day—Sailing Day—if our stores come!

Greece is cold in March and the north wind blowing down from the mountain snows under gray skies was chill when we arrived in Piraeus to start the fitting out of *Regina Maris* for the long voyage back to Boston. The Ocean Research and Education Soci-

ety, Inc., newly organized to study and teach open-ocean ecology, after much deliberation had decided to buy the ship as the vehicle for its studies of whale and porpoise behavior offshore. Our job was to ready the ship for sea, and to sail the ship back to Boston in time to load oceanographic equipment and begin our whale work in mid-July.



On the way we hoped we would join the Tall Ships Race from Tenerife to Bermuda in which we would be the only entry flying the US flag. The idea had lots of appeal for our volunteer delivery crews.

Looking around the empty decks this morning it is hard to believe the recent frenzy of activity and remember the innumerable "faults" found and set right, the myriad tasks large and small that had to be carried out to bring the ship to her present state.

When Ann, the cook, and I arrived we found Tom, the second mate, and Jerry (both old *Regina* hands) and Peter, the first of our volunteers, already aboard and waiting to start work. Mike, part owner and captain, his wife Patch, and Tom, the chief engineer left over from the last voyage, completed the "crew" that evening. The rest of the crew—17 in all—were to report on board one by one over the next two weeks.

Fitting out always involves lists, lists, and more lists. As the length of the voyage aboard increases, the length of the lists increases by the square; if the ship is unfamiliar to most of the crew, the increase is by the cube, and if she is a square-rigger like *Regina*, the exponent is at least four. Besides, in a new ship one has to learn how things are put together, why things have been done the way they have, and what there is already aboard you can use and what should be thrown away.

Luckily for us, Mike and Patch knew their ship inside out, Tom had sailed in her for four years as hand, bosun, and finally second mate, and Tom the engineer, although relatively new to the ship, knew the engine room as though he had built it himself—which, in fact, he very nearly had. All had agreed to help us get going as best they could and without their wisdom and work the whole process would have taken months rather than weeks.

As it was, we spent most of the first 10 days exploring the vessel, writing an ever-growing list of needs, and chasing around the towns of Piraeus and adjoining Perama trying to find all the bits and pieces. There is no question that somewhere in the Piraeus-Perama complex one can find or fix any piece of ship there is. The problem is to find suppliers and repair people who can: (1) understand English; (2) find the parts needed to do the job; and (3) most important of all, are willing to do the job for the price which does not include a profit of over 100 percent or a bribe of similar dimensions. Such people *do* exist and eventually we found them. Once we had, except for the time problem, we received excellent work for reasonable prices. A few things are real "buys," among them blocks. A







*Regina Maris, like so many Northern European work boats, has fixed gaffs and loose-footed sails which are pulled out along the gaff and boom when in use and are brailled up to the mast with clew lines and two sets of brails when not*



*The myriad tasks large and small that had to be carried out*

block maker in Perama made the ship a full set of 322 blocks in six days for six dollars each, beautiful blocks with beechwood shells, brass sheaves and galvanized straps.

While the cook labored with chandlers and the local market, and the skipper with deck stores, money exchange (it can take four hours to cash a check in Greece) and schedules, the crew began by tarring all the servings in the rig with Stockholm tar—a delicious smelling potion which soon covered not only the rig but all their clothes, themselves, the seats in the mess and everything else in sight. From there they moved to paint; wooden ships have acres of paint and all of it needs constant renewal. Waterways, iron straps, turnbuckles, and padeyes all received careful attention: scrape and chip, sand smooth, red-lead and undercoat, and finally paint the final coat with a gloss finish if the mate is going to be satisfied with the final results. Varnish everywhere requires renewal and *Regina* has lots of it, so the crew had plenty to do to keep busy as the days passed and its numbers grew.

At the same time, everybody began to learn the maze of lines needed to handle even the five yards, two booms, and two gaffs with their attendant sails which drive our three-masted barkentine. At first the whole affair looked impossibly complex. Then gradually, as one begins to understand the purpose of each line and its relation to all the others, the whole begins to make sense and *great sense*. The square rig evolved in the hands of seamen, and good seamen are methodical, careful and conservative. By the time steamers began to replace sail, a system had been worked out which was duplicated on virtually every square-rigged ship all over the world. Clewlines, leachlines, and bunt lines followed each other in the same logical order on the pin-rails of every ship. Any square-rigger man could move from ship to ship and know what to do immediately. For us it had to be a cram course; Underhill's excellent book, *Masting and Rigging*, was left in the mess for study at morning tea, after meals, and in the evening. And of course Mike was there to answer questions and instruct the uninitiated.

Finally, the day came to bend sails, the day when instruction *really* began. While Jerry, the sailmaker, made a few needed minor repairs, each sail was moved aloft. Bunts, clews, and leech lines were made fast on the square sails before the tacks were stretched out to the yardarms with handybillies and the headrope was seized to the



jackstay with marline and rope-yarn.

Even the fore-and-aft sails were unfamiliar to the Americans in the crew. *Regina*, like so many Northern European work boats, has fixed gaffs and loose-footed sails which are pulled out along the gaff and boom when in use and are brailed up to the mast with clew lines and two sets of brails when not. Again new ideas had to be planted, but once implanted the system was logical and sensible, and thus easy to follow.

It was amazing to watch boys and girls from Harvard, Williams, Bates, Dalhousie, Colorado, and other colleges who looked as if they belonged in lecture halls or behind office desks, running up the rig and out onto the yards to bend or furl sails as if they had been working 30 to 90 feet off the deck all their lives.

"Fore-and-aft sailors live on deck, square-rigger men live aloft," Mike said one day. Although square-sails can be partly doused from the deck with clews and bunts, furling ultimately requires hands on the yards. The rig, unlike that of the modern yacht, is designed to have the crew go aloft. Ratlines, crown-lines, foot ropes, and jack-stays give footing and handholes galore, along with shrouds and back-stays, tops, crosstrees and trestle-trees, so that the sailor aloft never lacks for something to hold onto. Unlike the modern rigs where safe ascent to repair broken gear is by bosun's chair only, going aloft in a square-rigger takes only as long as the man requires to sprint up a ladder 30 to 90 feet long.

Saturday morning was moving day. Mike agreed to con the ship into her new birth where fuel and stores could be loaded as his final act of command. It was a fine clear morning with a brisk westerly breeze. Our anchors came aboard with no trouble and by 0730 we were ready to enter our new spot, only to be told by the harbormaster's boat we had to wait until 0900. The delay gave us a perfect excuse for a trial sail while the stars and stripes snapped jauntily at the gaff and the new skipper fretted over the delay in loading of stores and fuel scheduled for 1000.

Nothing in Greece ever happens at the time expected and the departure of the ship in our awaited berth was typically Greek. Instead of 0900 she sailed at 1015 so we did not dock until 1100, in part thanks to a snapped dockline which nearly put us into a gleaming white power yacht and required that we depart and "regroup" with new lines. The "Med Moor" looks good on postcards and is easy enough in small boats, but with 400 tons of oak to maneuver it is tricky, slow, and filled with potential disaster.

Fuel and lubricating oil awaited our arrival but noon came and went without stores, and a returning emissary to the chandler reported there would be none after all until Monday at earliest. A brief but urgent interview with the president of the company convinced the skipper that indeed nothing *could* be done, but that Monday noon would bring everything.

A few words should be said about Athens-Piraeus, Greece. Nearly one third of all Greeks live in Athens-Piraeus and connecting cities. They are crowded with people, cars, tourists, and a jumble of houses and shops. Prices of Greek-made things are very reasonable and the food is good, the wine fine and both are cheap. *But*, imports all carry at least a 100-percent duty—120 percent on automobiles. Despite rumors to the contrary, Greeks don't speak English except occasionally and the Greek alphabet is entirely different from English so most of us can't even read street signs. As a result it is a very alien society.

But Greeks are generous, helpful and warm and they love drama. Hand-language is as valuable as words and can take one a long way. Even so, it is hard to get things done in Greece. Lack of understanding—the torrent of words needed to express even the simplest thought—makes progress slow and uncertain. Indeed, without the devoted help of George Slotter and his fluent Greek, we probably would never have made it.

Outside the city the country is beautiful, uncrowded, and covered with wild flowers in spring. Everywhere one finds remnants of the monuments of classic times—as beautiful in their simplicity as any remnants of any civilization in the whole world. When the bustle gets too bad and the frustrations overwhelming, an hour at the Acropolis, or half a day at Poseidon's temple standing alone on its headland above the sea at Sounion is enough to restore reason and give one again a feeling of the immensity of time and the indestructibility of beauty.

And then there has been *Regina Maris* herself. Although she may seem an anachronism in a modern port amid modern freighters, her barkentine rig and sturdy wood construction make her a link with the antiquity that surrounds the harbor. A few minutes quiet reflection on her deck can afford much the same restorative powers, but a sense not only of the past but also of total involvement in recreating a heritage as well as undertaking a new and productive use for a ship that is in no way merely a remnant of the past.



A block-maker in Perama made the ship a full set of blocks in six days for six dollars each, beautiful blocks with beechwood shells, brass sheaves and galvanized straps





# Sail Training Associations Across the Sea

by Bill Beavis

*the history...*



Robert Foley

Not since the days of the gold rush when crews deserted by the hundreds and left San Francisco harbor brimful of ships have so many big sailing vessels been seen in a US port—or anywhere else in the world.

Whoever would have thought, when the last great sailing ships were laid up, that such a thing could ever happen again? But almost as strange is the thought that the man behind the modern gathering of tall ships, the man who conceived the ideal of the Tall Ship Races, had absolutely no connection with the sea at all.

It was in the early 1950s, the peak of the Cold War period, when Bernard Morgan, a London solicitor, became deeply concerned about the effect the hostile political climate was having on young people. He decided that he might engender goodwill, allay suspicion, and promote understanding if he could hold some sort of international jamboree.

Morgan conceived the idea of a sailing ship competition which could bring together boys (and later girls) from all walks of life and with no special prowess—except the ability to shin up a mast and the quest for adventure. Moreover, they would not compete just against one another but also against the sea.

In those days sail training was confined almost exclusively to the merchant and fighting navies of the world and from these Morgan reckoned there would be the sufficient nucleus of a fleet. With the aid of experienced

friends such as Capt. John Illingworth, the yacht designer and ocean racer, and the active support of Prince Phillip, Duke of Edinburgh, he drew up rules and arranged the first race, which was from Torbay in Devon, England to Lisbon. A satisfactory system of handicapping separated the fleet, according to size, into two divisions. However, the most important rule of all which has become the keystone of the Tall Ship races is that 50 percent of the crew of each vessel must be comprised of young people under training and their ages must be between 16 and 21.

By 1964 the biennial races sponsored by the British Sail Training Association were well established, interest had grown enormously, and sail training ships were entering from all over the world. This was the year that its new organizer, Col. Dick Scholfield—the man who brought the event to its present size and popularity and who, incidentally, retires this year—planned the ambitious transatlantic race with stops at Lisbon and Bermuda and terminating in New York with Operation Sail. This was the pilot race for the one we are seeing this year and Americans' first sight of a fleet of tall ships in their harbors waters.

A new feature of the 1964 races was the crew interchange among the entries. Groups of young crew members joined other ships in the race, so that one vessel might carry a crew made up of representatives of each nation with a ship in the races. So successful was the arrangement that "crew swap" is

now a regular practice in tall ship races.

In 1972 the STA was in shaky financial shape, and badly needed a sponsor. Finally, one came forward—John Rudd, managing director of Berry Bross and Rudd. He rescued the STA, and, thanks to his company's generosity, the Association and the tall ships races it sponsors continue today.

The STA has grown from its modest beginnings because the concept of building character and giving adventure to young people by having them man a ship at sea is a concept that works. Its benefits are equally appreciated by those of us in democracies and by those in many other types of political regimes—the Russians, the Poles, and the Rumanians.

The *Sir Winston Churchill*, the 153-foot three-masted topsail schooner built in 1966 was the first STA large sailing vessel built for the exclusive purpose of developing character in young people. The *Churchill* is one of two schooners administered by the STA and takes a crew of youngsters 16-21 years old on two-week cruises. For the final leg of the 1976 Tall Ships Race from Bermuda to Newport and for the parade of ships on July 4, all her young crew are girls.

One major problem with a tall ships race is getting all the vastly different types of entries to arrive so that they all can take part in the festivities. Under strong winds the big square riggers can make up to 300 miles a day, but if the wind fails or is from ahead they





Stanley Rosenfeld

## *the people...*

make virtually no progress whatsoever.

For this reason there is a time limit. If the competitors have not reached their destination before the wind expires, they are permitted to start their engines and proceed to the arrival port at their best possible speed. The race for them is calculated on the assumption that there was not a time limit and the average speed they made under sail is projected.

For the 1976 transatlantic race the fleet is divided into three classes. Class A is for ships longer than 200 feet, the "tall ships." Class B is for ships under 200 feet sailing under working sails. Class B2 consists of more modern craft and smaller boats using conventional racing equipment such as spinners.

The STA has devised a unique "rating rule" which allows the varying types of ships to compete on nearly equal terms. A complex arrangement, the rule awards points to such things as bowsprits, gaff rigs, and old age, while putting a penalty on racing gear.

For each tall ships race there are a selection of prizes to be won, but the premier prize is the Cutty Sark International Trophy, awarded to the ship which, in the opinion of all the masters taking part in the race, has done the most to promote international under-

standing.

Any account of the origins of the British Sail Training Association would be incomplete without a word about the formation of an American Sail Training Association. For the 1972 tall ships events Captain Barclay Warburton of Newport, Rhode Island, took his 70-foot hermaphrodite brig *Black Pearl* to England and the Skaw, the first time an American sail training ship had entered the biennial gathering. From his participation Warburton brought back to America the impetus to form an American Sail Training Association.

The fledgling organization has remained loosely organized, yet with the initiative to host the transatlantic racers, more than 90 ships plus their officers, crews and cadets for a variety of events in Newport prior to their departure for New York.

In keeping with the principle of fostering goodwill among those manning the ships all the activities are designed to bring the young people and the local citizens together to their mutual benefit.

And this, after all, is what sail training, transatlantic races, and an international meeting of young seafarers and the people in their ports of call are all about.







# Clearwater clear water

by Charles Mason

When the tall windships of the world assemble at New York this Fourth of July it will be a sight for generations. Millions will rejoice and cheer as the fleet of sail, once such an important part of all the world's endeavors, comes in from the sea on a freshening breeze to stand into the Hudson River. Once numbering in the thousands they are only a handful today. All the rest, just memories and dreams—hazy recollections with faded photographs, or daubs of color limned by some long forgotten artist.

But the heritage persists, and the sight of these ships and the men who toil high in their rigging is a joyous glimpse at the past; at the history and traditions of sail.

Their glory still shines brightly. And it shines even more brightly with the sighting of the *Clearwater*. Look for her as she comes in—a big handsome sloop with classic sheer and a huge mainboom to extend her majestic wall of canvas

aloft to catch the breeze. Beneath her bowsprit, a beautiful Canada goose with carved wings outstretched, swoops low across the water. A work boat, she carries essential cargo, a message that must reach its destination.

And if the *Clearwater* stands into the Hudson with a bit more assurance than the rest, spins lightly on her heel with a bit more precision as she tacks in the wind, why, that is to be expected. The Hudson River is her home. The river is hers and the reason she exists.

*Clearwater* is no yacht, no pampered antique, not even a sail-training vessel in the dogmatic sense of the word. *Clearwater* has no single owner and no syndicate pays her way. No, *Clearwater* is owned by thousands of people, people from all walks of life who volunteer their time and contribute what they can to make the dream of a beautiful sloop sailing in clear water on the Hudson come true.



Matthew Walker



*Clearwater* is a work boat, a Hudson River Sloop, they call her, a faithful replica of the boats that sailed by the hundreds up and down the Hudson River for over 200 years. Refined over time by the winds and currents of the Hudson's waters, the sloops were honed to perfection in the early 1800s at the same time and by some of the same hands that put down the lines of the world's swiftest and prettiest clipper ships. Though the sloops rarely voyaged far in the ocean, their architectural lineage is as clear and unmistakable as any pedigreed Cape Horner.

Hudson River Sloops. Sailing passengers up and down the river at first. Then, when the steam locomotive matured in the middle of the 1800s, they earned their way to history by carrying Haverstraw brick, Catskill lumber, and Connecticut brownstone to build the magnificent town houses of New York City.

But all these sailing river boats are gone now except for the *Clearwater*. And with their passing, the great traditions of sail in the Hudson, a river that had never been without fleets of white-canvassed sloops crisscrossing back and forth in the channel, vanished with them. Sadly, the river's clear water has vanished too.

The Hudson stretches only 315 miles from its unspoiled source deep in the heart of the Adirondacks to its termination just south of Manhattan Island. While the river once ran clear, what a trip it must make today. Though it still starts clean and pure at its headwaters, it flows down past cities and towns assaulted all along the way by factories, dumps, and sewers, until it finally empties, soiled and grimy, into the waters of Lower New York Bay.

Such despoilation has been the experience of virtually all the great rivers of this country. But the Hudson's condition is especially sad, for it has always been one of the great marine nurseries and spawning grounds for many species of fish that flourish along the North Atlantic seaboard. Shad, blue crab, striped bass, eels and bluefish are just a

few that have drawn their primary nourishment from the waters of the Hudson. All that has changed now, for there is poison in the river bed.

Sailing a Hudson River Sloop has always demanded the highest degree of seamanship. The tricky winds and tides of the Hudson's channels required the master of such a sloop to handle his vessel with absolute precision. If the course was not true, there would be no chance at all to correct. Even the largest of the sloops had tillers, some of them a full 12 feet in length or more, to enable the helmsman to maneuver quickly in the restricted confines of the river.

The famous North River Gybe was perfected by the sloop captains. It is a gybe done all standing, but done so quickly and with so much skill that a sloop could gybe back and forth down the river every few minutes at 10 miles an hour or better, and never stray from the channel. And only the greatest of sailors would be able to handle the sloops in this way as they rushed down the river with a deck full of cargo headed for New York City.

The Hudson River has always befriended and given strength and inspiration to those who have lived along its banks. Washington Irving wrote

*The Hudson once ran clear but today it is soiled and grimy*

*White sloop sails used to crisscross the channel by the hundreds. All are gone now except for the Clearwater*



Dan Budnik



Dan Budnik



Thousands have sailed on her  
and marvelled at her size and beauty

Dan Budnik



Dan Budnik



lovingly about the sloops and the river they sailed. And a whole school of Hudson River painters led by Thomas Cole were moved by the romance and compelling beauty of the region to create pastoral images admired by the entire world.

The sloops vanished from the river at the turn of this century. And though they were gone forever, gone to memories and dreams, their existence would be preserved. Moses Collyer and William Verplanck were two men who, believing the sloops were the most beautiful boats they ever knew, wrote a little book called *The Sloops of the Hudson*. Its pages contained no great literature but they held a lot of care. One chapter was devoted to nothing more than listing the names of every sloop captain they could recall; they justified it by saying that Homer had his list too.

Some 50 years after it had been written, the book was read by Pete Seeger and he, along with some other sailors and residents of the river valley, became inspired by the dream of having a giant sloop once again sailing, sailing in a clean river. The sloop would be a work boat, just as they always had been. But instead of sailing Catskill lumber and Haverstraw brick to New York City, the sloop would carry a message down the river—and to the world.

They began a search; but it was true. All the sloops had indeed vanished from the face of the earth. Their dream of a sloop persisted, though, and grew stronger with the passing of time. A replica it would be. Built in the shape of the most glorious river sloop man could create.

When the painstaking research was complete, and the plans drawn, they went to a millionaire

who lived high above the river, in the beautiful Hudson Highlands. It was a beautiful boat, he said, and he wished he could help. But why would anyone want to sail a boat in the Hudson? After all, he did his own sailing in the Virgin Islands.

The *Clearwater* sails through tricky waters. For generations Americans have always had the opportunity to move, to leave things behind; to travel West, to settle the suburbs, and to sail in the Virgin Islands. And while some may still be able to move away, there are signs that many are staying at home, and working to change things for the better.

And that is what has happened with the *Clearwater*. The call for help to build a sloop to save the river went out among the people of the Hudson River Valley. Volunteers came forth, sloop clubs began to form up and down the river bank, and the fight began—to build the sloop and stop the destruction of the river.

The call went out just 10 years ago. Then, three years later, after three years of hard, hard, work to raise the money, on May 17, 1969, *Clearwater*, all of wood, freshly painted, and gaily trimmed with bunting, slid triumphantly into the water for the first time. The dream had been realized. A sloop would once again sail the Hudson River. And someday the river would once again run clear.

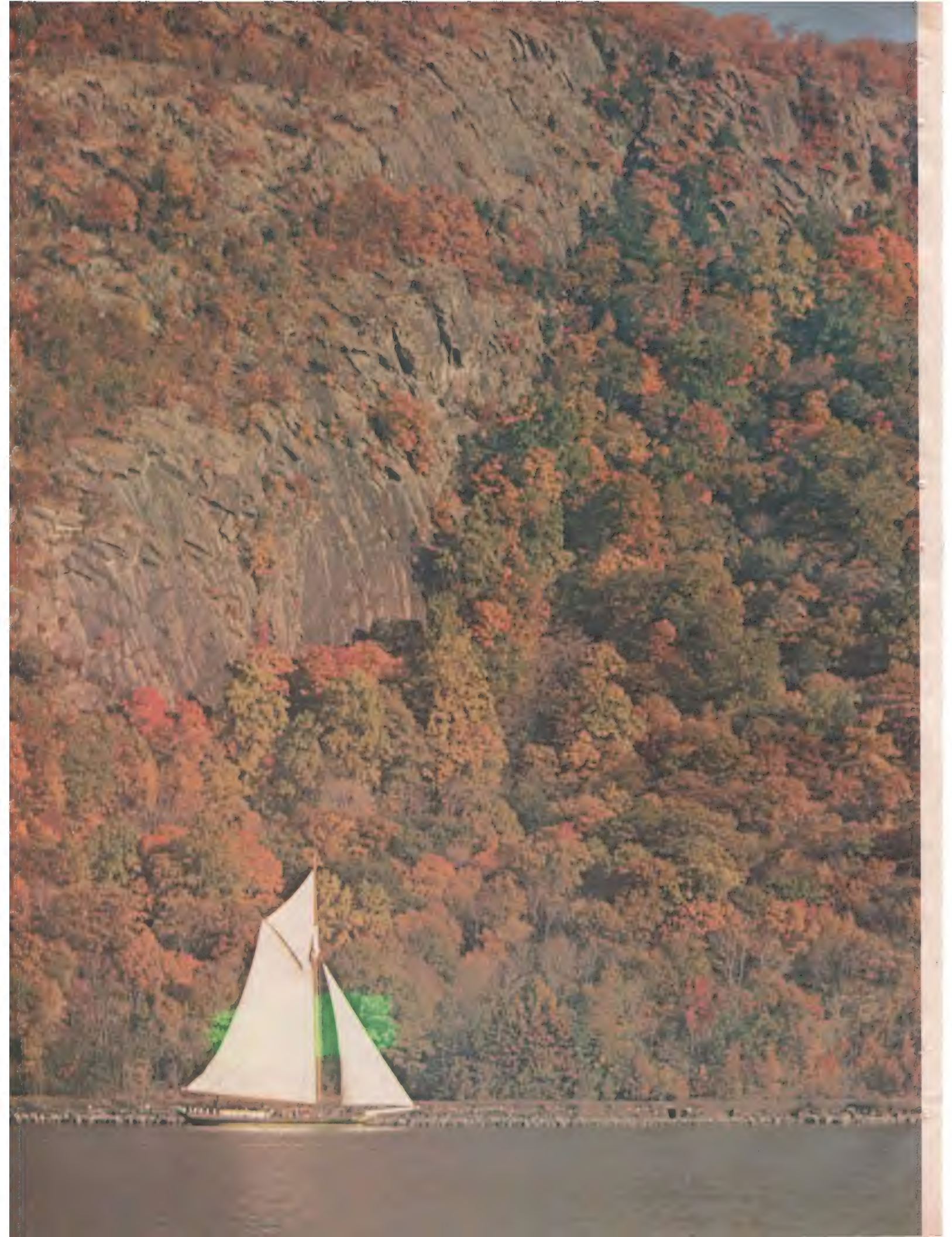
The *Clearwater* has sailed the Hudson and along the shores of Long Island Sound every year since, a success. Thousands upon thousands have sailed on her, crossed her decks, and marvelled at her size and beauty. And when the *Clearwater* comes into a town there is always excitement: a festival down on the waterfront with music, food, and an overflow audience. People come from everywhere,

*The Clearwater carries her cargo, a message, to the towns along the river bank—and to the world*  
photograph by Dan Budnik













Pete Seeger sings for an enthusiastic audience gathered along the river bank. The Hudson River Sloop Restoration is a non-profit organization that owns the *Clearwater*. For more information write them at 88 Market Street, Poughkeepsie, New York 12601

from up on the hill, from down by the water, and from out in the suburbs; sailors and landsmen, young and old. All come to see the river and the marvellous boat. And they stand in awe at the sight of a dream that means so much to so many people—the dream of clear water.

The Hudson River is getting cleaner, though there have been setbacks as there always are. In the Hudson (and unfortunately elsewhere) it has been the discovery of polychlorinated biphenyls in the river bed. Used since the 1930s as coolants and insulators in batteries and transformers, PCBs, as they are called, are highly resistant to biodegradation and are highly toxic. The *Clearwater* and others sounded the alert but it was too late. Fishing in much of the Hudson is prohibited today, for the fish have been poisoned by the PCBs.

People can be poisoned by them too and a growing body of evidence shows that man-made hazards are replacing famine and infectious diseases as the significant determinant of life in this 20th century. And sadly, though there is substantial evidence to indicate that 60 to 90 percent of all cancer is related to environmental factors, the latency period before discovery may extend from 15 years to 40 years.

Clear water. The words seem simple enough. But there is the story of the Mississippi River and New Orleans, the story of Lake Erie, the problems in Lake Superior, and the encroachment on the oceans themselves. These are dangerous times. The *Clearwater* carries the alert.

When the next threat will emerge it is hard to say. But those who are making the decisions, like those sloop captains in the river channel, will have no second chance. Their decisions have to be cor-

rect, for they are going to affect the peoples of the world for years to come.

Progress won't necessarily be easy, and it won't happen overnight. But all sailors everywhere must be concerned about how to protect the water they drink, and the waters they sail.

So as the windships of the world gather this July, keep your eyes on the *Clearwater* as she comes in from the sea with her pennants flying bravely and her big mainsail pulling her home like a stable of horses. A work boat sailing majestically alone.

Rejoice at the sight of the *Clearwater* for she is our dream—and the Hudson river is every river. Rejoice for all the sailing glories of the past, but think also of the future. Think of the fish that swim poisoned in the river bed below while millions cheer and don't know why.

Unlike those who have come before us and left to move West, to settle the suburbs, or to sail the Virgin Islands, there no longer is any place to hide. The *Clearwater* tells it true.

*Clearwater*. Not an antique, not a yacht—a working work boat from out of the past, sailing today to help save tomorrow.



Dan Budnik

*The Clearwater tells it true. There no longer is any place to hide*  
photograph by Matthew Walker



you get what you pay for . . .

# Yacht Deliveries

by Lin and Larry Pardey

Every business deal has two sides and yacht deliveries are no exception. There's the owner, handing over his well-loved yacht, dear to him as his teenage daughter, to a complete stranger to be taken on a journey full of potential dangers. The owner wants his boat to arrive in the same condition as when it left, as soon as possible.

The yacht deliverer, on the other hand, sees a Pandora's Box of a boat full of hidden problems. All he wants is to move it from point A to point B as quickly as possible with no breakdowns or delays so he can collect his fee and get on with his plans.

In few business relations do the employee and employer have less personal contact. That's why special thought and consideration should be given to a delivery contract. The owner should know what he is asking for and who he is hiring. The deliverer must consider the responsibility he is assuming.

## The Owner

Deliveries cost money and there are few bargains. When you hire someone to sail your \$40,000 to \$200,000 worth of yacht across an ocean, you need a skilled person, one who will maintain your investment all the time it is under way. The man you hire must not only know how to navigate, sail, handle a crew, operate engines and generators, but also and more importantly he must know how to repair almost everything on board with what spares are on the boat. He must know how and where to find supplies in foreign places; and he must know how to maintain varnish, paint and keep your interior clean while the boat is under way. This all adds up to a very skilled person. And remember that your delivery captain is involved 24 hours a day from the moment he steps aboard and you'll understand why delivery fees look high at first glance.

At present a contract delivery will cost you about \$1.25 US a nautical

mile plus fuel and airfare for the captain and a reasonable number of crew. Or you can hire a delivery captain on a daily basis for about \$70 per day plus all expenses including crew, food, fuel and airfares. With a good delivery man the final fee will come out about the same whether you figure it on a contract or a daily basis.

What is the alternative? You can ship your yacht by truck for continental deliveries or by ship. But if the yacht is over 36 feet you'll often pay more. By ship the rate must include unstepping the mast, building the cradle, agents' fees, re-launching and resteping the mast and transport from a big ship's harbor to a marina. The actual shipping fee is based on the cubic area that the boat and its mast will take up. Figures vary greatly, but a friend of ours shipped his 45-foot "gold-plater" from Denmark to New York in 1974 and it cost a total of \$13,000. A sea delivery would have been about \$8,000. But the owner saved 6,000 miles of wear and tear on the boat and its gear. His yacht did receive some damage, a scarred toe rail and a dented boom, and his wooden topsides became cracked from being exposed to the sun without being washed down with salt water.

Good professional deliverers are expensive; shipping is expensive; but bargain deliveries can cost you even more. Frank couldn't afford a regular delivery team and gladly accepted when a friend of his said, "I've got two months off, I'll take your ketch back to England for you. Just pay me for the food and airfare." Frank had cruised locally for a few weeks with this fellow and knew that his friend's longest off-shore passage had been 200 miles, but the man loved Frank's boat. Two months later Frank received a message. The boat had been abandoned in a tiny port 200 miles from its starting point. All of its gear had been stripped off by scavengers. The friend had been scared to leave port after a two-day

blow outside of Cape Town. His crew had jumped ship. The engine had quit. In the end it cost Frank his boat. He couldn't leave his contract job in England to go out and repair the damages. No delivery team would go for the boat after hearing a report of its condition. So Frank ended up selling his dream ship for the price of its lead ballast.

Delivering a boat is not fun; it is work. Asking amateurs to do it may be asking for trouble. We can cite stories of cut-rate deliveries that took two months to move a boat 800 miles, of boats abandoned during storms, of boats confiscated when non-professionals used them for smuggling drugs. Without a reputation to protect, a non-professional deliverer will think first of *himself* and secondly about your boat.

To protect you and your investment, don't hire anyone to move your yacht unless you can get the names and addresses of at least two people whose boats he has delivered. Call these people. Ask them what condition their boat arrived in. If the owner tells you his boat arrived on time, in good shape, you've found a good deliverer.

If you are arranging a delivery through an agency, insist upon knowing the exact person who will be in charge of your yacht. Call him and get the names of people he has delivered boats for. If an agency is real busy they might let relatively inexperienced men handle simple-seeming jobs. Four years ago we delivered two yachts from Miami to Puerto Rico. The first time we arrived in San Juan we noticed a 30-footer laid up at the dock, its transom black with soot, its diesel out of commission. Three weeks later we arrived again to see a second boat, identical to the first, its transom also black with soot, its engine out of commission. Both boats were part of a large contract handled by a firm with an excellent reputation. In both cases since the distances involved were only about 700 miles, the deliveries had been turned over to sailors on their first professional





Lin Pardey

*A yacht deliverer should survey the rigging and mast of each boat before he goes to sea*



Lin Pardey

*He may have to splice a new halyard or shroud*

jobs. No matter what reputation the agency has, check the references of the person who will be on your boat and in charge.

Don't be swayed by the sell a sailor walking down the dock gives you. *Call his references.* The owner of a 50-foot South African yacht came by one day to tell us he'd found a very inexpensive delivery captain. He described the crew off a local charter boat, a young bearded sailor who told excellent sea stories. It was only after the boat was at sea that the owner learned that the longest voyage his captain had made was from Barcelona to Palma, Mallorca, a distance of 120 miles. The owner told us he started worrying when he saw the boat the man he had hired owned. It was in terrible condition and had been left secured to a mooring in an exposed part of the harbor. As the owner said, "If he takes care of his own boat that way, what will mine look like in two months?"

Once you've located the person you wish to hire, tell him all the problems he may encounter with your boat so he can plan accordingly. If it doesn't have an auto pilot, tell him so he can arrange sufficient crew. Let him know the state of the engine, its fuel consumption and all about your electronics and equipment. Don't be optimistic about the boat's range or fuel capacity. Give the captain a frank idea of what you have on board. The delivery captain may fly to Europe to pick up your boat and find that he didn't bring the right gear and spares along. Then he'll have to spend your money and his time getting ready to set off. The more complete your description, the more prepared he'll be.

An owner got a transatlantic call from his delivery captain, "Sorry, I

can't take your ketch across the Atlantic till it has new standing rigging."

The owner replied, "What? That's only six-year-old wire. I crossed the Atlantic two years ago with it."

The delivery captain, a well respected, very experienced man, refused the job and the owner lost the cost of two airline tickets. He called a second deliverer who came and said the same exact thing. So the rigging was replaced. If you have hired a good person, trust his judgment. He is the one who is risking his life and reputation when he sets off across an ocean.

**It was only after the boat was at sea that the owner learned that the longest voyage his captain had made was from Barcelona to Palma . . . a distance of 120 miles . . . Frank ended up selling his dream ship for the price of its lead ballast**

The delivery captain and crew are going to be living on your boat for several weeks in possibly rough conditions at sea. So if you have any treasures, either take them off the boat or store them carefully away and warn the deliverer. There is bound to be some wear and tear on a yacht during any passage and you must expect to lose a glass or two or have some chafed lines or even more extreme damages. In one case we heard of from both sides, a well respected captain was asked to deliver a 48-foot racing boat from the US Northeast coast to the

Southern Ocean Racing Circuit in Florida during late November. Because of the risks of storms, the job was bid to allow all professional crew. Two days out the delivery ran into a freak cyclonic storm. For three days the team rode hove-to, trailing warps, lying in the trough, any way they could to ease the violent motion. On the last day a sea turned the boat upside down and the mizzenmast carried away. The crew was able to cut the wreckage loose with no further damage. When the weather eased they stood into Norfolk, Virginia, and called the owner and his insurance company.

Instead of being relieved that no one had been lost, the owner raged over the fact that the 18 Barient winch handles, stored in pockets on deck, had gone over when the boat rolled. Considering that several fishboats were lost at sea during this storm, and the four men on board had survived three days of winds that were at times in excess of 100 miles an hour, I think the owner was being unfair about the loss of the winch handles.

Finally, as in all business deals, get a contract. Make sure it gives an estimate of delivery time. It should also include the deliverer's expected route and the number of crew he plans to take, plus what expenses he will cover and what you as the owner must pay for.

#### **The Deliverer**

"Delivery work looks like a great idea. Seventy bucks a day just to enjoy yourself and go sailing."

It's not that easy. Few delivery jobs turn out to be fun. Job equals work. People aren't going to pay you to take a well outfitted, fine sailing yacht on a



downwind, perfect season cruise. Boats are almost always delivered to windward. Old or neglected boats are delivered. Brand-new boats fresh from the factory, full of bugs and untried systems are delivered. And whatever its condition, the owner usually wants the boat as soon as possible. In most cases delivery services figure on a time of one day for every 100 miles plus preparation time. That doesn't allow you much cruising. On our last 5,800-mile delivery, we spent 10 days preparing the boat and arranging crew, 50 days at sea and 11 days in four ports for a total of 71 days. Two days in each port we devoted to renewing stores, going over the engines, maintaining the sails and varnish. That left us three days during which we relaxed over two months or less than a day per port.

Most delivery captains combine delivering with another profession, because unless they are on the top of the list with a busy delivery service, they'll rarely earn enough moving yachts to support a home and family. But for cruising people like ourselves, or for people with loosely planned schedules, delivering is good experience and a fine way to earn a lump sum of money because it's hard to spend much at sea.

Delivering someone else's dream ship is a large responsibility. Instead of taking a month to get to know the boat you are setting off in, you have to step on board a strange boat, survey and assess it, outfit and get under way in a week or less. Once you're on board

you have to be a jack of all trades. You must be able to jury rig, hay wire and maintain a boat you are completely unfamiliar with. You'll have to know what spares are vital. The owner is turning the job over to you so he won't be bothered. The last thing he wants is to be called from each port with, "The Jab-sco pump impellor is burned out," or "The generator's not working right." The people who make the best delivery captains are first good mechanics and riggers, and second sailors and navigators.

An owner is influenced by first appearances just as much as is anyone else. If his or her yacht arrives in port with nice looking varnish, scrubbed decks and the interior in immaculate condition, he or she will overlook most small mechanical problems. So it really pays to spend your time at sea spiffing up the boat. It also pays to roll up and store away carpets and curtains. In a factory-fresh boat, avoid using any of the facilities you can so that the owner has the thrill of stepping into a new boat when it arrives. Most owners are willing to add a tip or a fine dinner on the town for the deliverer and crew that bring in a yacht that looks better than when it left. And they'll definitely be willing to give you the reference you'll need for the next delivery job.

Whatever you do, write a contract, then get a  $\frac{1}{3}$  to  $\frac{1}{2}$  deposit before you leave to pick up a yacht. Make sure your contract states how the final payment will be made and in what currency. Include a clause that allows for

expenses during breakdowns and states something like, "The deliverer will allow three days for breakdowns because of faulty or worn equipment during the entire course of the delivery. After three days the owner must pay an additional \$35 per day to cover cost of maintaining crew and boat during time taken to repair any breakdowns." Of course if the delivery is based on a daily fee this clause is not necessary.

As for the final payment, it is safest to ask for cash on the barrelhead in the currency of your own country. Don't turn over the boat until you are paid either by the owner or his agent. We have never had any problem with payment, but we've heard of several including one story about a deliverer who had to wait two weeks for the owner to arrange to turn South African rands into dollars to pay the fee. The deliverer missed a berth on the Cape Town-Rio race because of the delay.

To protect yourself in foreign countries, have the owner write up a document making you captain of the yacht with full responsibility during a specified time in specified waters. It may come in handy, especially in African countries.

And finally, keep a log for the owner. He'll really appreciate knowing any problems you had, how many hours the engines were run, what spares you used up.

Yacht deliveries involve a great deal of money. But, like any good business deal, a yacht delivery should come off with both parties satisfied and ready to do business again.

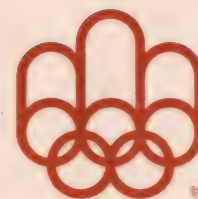


Larry Pardey

*We wish all deliveries were like this . . .  
but they aren't*



# Here Comes Kingston!



KINGSTON  
1976



Charles Mason

It happens every four years . . . the most exciting and closely watched small-boat racing there is . . . the Olympic Games . . .

The XXI Olympiad is here; and the scene has shifted from the XX Olympiad at Munich and Kiel in 1972 to Montreal and Kingston. All will have been in readiness for some time at Kingston when the sailors hear their first gun for the first race on July 19. Unquestionably, this Olympic competition will be the most keenly contested in the history of the sailing games, for yacht racing has come of age, and national dedication and pride of achievement in the sailor/athlete are running at ever greater heights.

Kingston is a small town (population 55,000) located on the north shore of Lake Ontario just 193 miles west of Montreal. Queens University plays a large role in the life of Kingston and during this Olympiad its dormitories and dining facilities will become the Olympic village for the athletes, support personnel, and press who will be on hand for the games. Less than a mile away from the Olympic village lies the newly constructed sailing center at Portsmouth Harbour.

Though Kingston has hosted for many years the annual CORK regatta, the Olympic Yachting Games this July will provide their own special excitement as the sailors of the world come

together to compete for that one chance to win a coveted Olympic gold medal.

What are the Olympics? In many ways they are nothing more than a capsulization of contemporary life. Nationalism and corporate hucksterism stand poised, ready to move alongside personal sacrifice and patriotism onto the media soundstage that has replaced the old stadia of the milleniums. But of course there is more to the Olympic Games. The Olympics create a special time when the peoples of the world, burdened as they may be with the countless problems of existence, can stop for just a moment to watch and contemplate together the perfection that comes with great sporting games. Olympic athletes become heroes, and they are willingly embraced as such. They are hailed because the performance the world witnesses is truly heroic.

And in the weeks of this summer's Games we will again see the ritual repeat itself. We will again be witness to the finest efforts that sport can produce. Excellence is the stamp of Olympic competition. And that is what the Olympics have always been about.

—Charles Mason





KINGSTON  
1976

Preparation for the sailing games has been more intense than ever before. From Australia Bob Ross looks at the challenges that will come from "down under" and assesses what the competition might be like at Kingston...

For this Olympiad, international competition in the Olympic classes has reached an unprecedented pitch of excellence. And it's a pity that unlike athletics, swimming and most of the other Olympic sports, only one crew from each country is permitted to compete. In that light, yachtsmen in many countries are pondering whether the Olympics justify the time, effort and money that have gone into sending six crews to Kingston to compete in one regatta.

On the positive side, Olympic class yachting, and particularly the intensive buildup to this Olympiad, are producing a super-breed of sailor, better hulls, faster sails, refinement in fittings, a closer understanding of wind behaviour. There's been a re-thinking of tactics using this new knowledge, increased sophistication of coaching methods, and more methodical physical and mental preparation. All these add up to progress that should filter to every level of the sport of competitive sailing. Unfortunately, it also widens the gap between the top performer and the rest, crying "wait for me" from mid-fleet or tail end.

Competition has been very tough over the past two seasons.

Jobs have been lost, and various other financial and emotional sacrifices have been made just for a chance of making the starting line at Kingston. The same dedication to winning in sail-

boats has been demanded that sends swimmers up and down a pool eight hours a day and athletes over their hundred lonely miles a week—more, really, because of the financial burden of putting together a competitive boat.

A young Australian FD sailor has been on the dole for two years because his job in the bank did not allow enough time for practising at home and campaigning overseas. Probably hundreds of others have taken second jobs—driving cabs, delivering newspapers, tending bar—to finance their boats and campaigns.

To support and develop a talent that lacks the money, strong national support efforts have been mounted, some with, some without Government support. It is easy to be critical of these campaigns, which usually involve commercial sponsorship as well as direct fund-raising from the yachting community. But they do tend to take the fund-raising burden off an individual sailor who, without Olympic aspirations, may sail a Finn or an FD just because he happens to like sailing that class of boat.

Here in Australia, we face an acute problem just getting our competitors to the international ball-park. Until 1972, anyone wishing to campaign in the Northern Hemisphere either had to have enough money to fund it himself, or had to have it raised through club or class association effort. And that meant endless gambling nights, raffle tickets, and brain-cell-destroying bottlings of wine from wholesale barrels sold to raise money for the Olympians.

After the 1972 Olympics, although two gold medals were won by Australia, it was realised in the light of the strong support team efforts of countries like Britain and France, and escalating shipping costs, that the good old wine-bottling and chicken-raffle efforts would no longer be good enough.

An Olympic Planning Committee, a sub-committee of the Australian Yachting Federation, was formed and it set about collecting a common pool of funds from commercial sponsors and government to promote Olympic yachting in Australia through coaching, an Olympic classes regatta each year, and financial help for the winners to compete in major events in the Northern Hemisphere summer.

This year, it has raised around \$90,000 to finance preOlympic training campaigns for the representatives in each class in Europe and North America. The committee has had its critics. To a non-Olympic sailor, the amount looks enormous (the cost of running the entire sport of yachting in the State of NSW, with a full-time paid secretary is about \$30,000).

But, says the OPC, this frees clubs

and Olympic class associations from much of the heavy fund-raising burdens. And to the also-rans, who seem to find themselves administering Olympic class associations and nursing them through the lulls in activity after the Olympics, there is, through the now constant participation of Australians internationally, a return in quick transmission of information on hulls, equipment and techniques. And the sport does need its heroes both to attract the young and to inspire the also-rans to try again!

Who will win? So much depends on last-minute tuning efforts, the weather at Kingston, and luck, that I'm reluctant to really try to pin it down. But here goes.

**Finn:** David Howlett of Britain has topped a thorough, long term campaign that took him across Hubert Raudaschl's loft floor to learn about sails, into the Navy where he presumably gets the time and the encouragement to sail a lot. Next, John Bertrand of Australia, fourth at Kiel in 1972. He has followed a long-range campaign to win the Gold this time, methodically and patiently. Third? Perhaps Jonty Farmer of New Zealand. If Kingston has the same strong-air conditions of last year he even could win.

**Flying Dutchman:** Jock Bilger and Murray Ross of New Zealand could win if they can reproduce the consistency that won them the class at Hyeres. They were fifth at the preOlympics after being disqualified from the first race for a premature start. They have the ability to analyse and improve instantly—Ross is a sailmaker—and it seems to be their turn. For the Silver, the Pajot brothers of France, who without their Kevlar hull may have lost the edge that won them CORK last year. The Bronze, the Diesch brothers of Germany. Then, comes Fogh (Canada), Pattison (UK), Wolf (East Germany), Bethwaite (Australia).

**470:** This is like trying to pick the winner of a lottery. The winner should, but may not, come from the French. Instead, it could easily be the United States boat or perhaps Hyeres winner Laurie Smith of Britain. And our own Australian, Ian Brown, must have a chance. He has had great heavy-weather boat speed and is an intelligent light-weather sailor.

**Tornado:** Reg White and John Osborne (UK) have been in terrific form this year, winning the Worlds in Sydney with a race to spare and winning easily at Hyeres, though they did not face the top US crews that dominated at Kingston last year. However, I still pick them, followed by the United States crew with Australians, Brian Lewis and Warren Rock, third. Jorg Spengler (W. Germany) or Robert Jes-



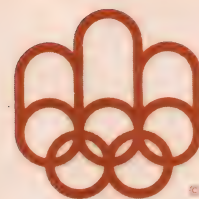
senig (Austria) will be the next best.

**Tempest:** John Albrechtson of Sweden with his giant crew Ingvar (the Slave) Hannsen, won the preOlympics last year, have been winning in Europe this, and are favoured, ahead of Uwe Mares (Germany), with Valentin Man-kin (Russia) my pick for third. Allen Warren (UK) will probably be fourth.

**Soling:** Though the American Trials have yet to be sailed at this writing, Buddy Melges (USA) is the only sailor in this whole regatta who can stand out as clearly a favourite as Paul Elvstrom

used to. His clear win at SPORT confirmed his super-talent status at the top of a tough class. Dave Forbes of Australia, winner at the preOlympics last year, in the absence of Melges and Star gold medalist in 1972, is winding up a very realistic preparation campaign in North America just before the Games, and is my next best choice to Melges. Third? Which East German, Below or Schwarz, makes the selection; Wennerstrom (Sweden); Kuhweide (Germany).

—Bob Ross



**KINGSTON  
1976**



#### **Finn**

Singlehander, centerboarder, length 14'9", weight 319 pounds, sail area 115 square feet. Designed by Richard Sarby (Sweden) in 1950. Cost (complete) \$2,600, construction fiberglass, world registration 6,000, United States registration 1,000. Countries expected to compete at Kingston—45.

The veteran of the Games, the Finn is making its seventh straight Olympic appearance. The Finn probably is the most physically demanding of all the Olympic classes, requiring great strength and balance from those who sail them. Optimum weight for a competitor is 185-200 pounds. The aluminum mast is both flexible and unstayed, allowing for great latitude in sail shape and trim. Course sailed: Olympic. Total race distance approx. 9.2 nautical miles.



#### **470**

Two-man planing centerboarder, with trapeze. Length 15'5", weight 260 pounds. Sail area 277 square feet (total), designed by Andre Cornu (France) in 1966. Cost \$2,900 (complete) construction fiberglass, world registration 25,000, United States registration 1,000, countries expected to compete at Kingston—43.

This is the first year for the 470 in Olympic competition and the racing is expected to be very intense. Extremely demanding athletically, the boat is fast in both a windward and downwind mode. Created to be an inexpensive boat, it has become very popular among younger American sailors despite its sensitivity to total crew weight, and has managed to attract many of this country's best young sailors. Course sailed Olympic. Total race distance approx. 9.2 nautical miles.



#### **Flying Dutchman**

Two-man planing centerboarder with trapeze. Length 19'10", weight 374 pounds, sail area, 360 square feet (total), designed by Uffa van Essen (Holland in 1951). Cost (complete) about \$8,000. Construction, fiberglass or wood. World registration 4,200, United States registration 1,300. Countries expected to compete at Kingston—34.

Extremely light and powerful, the Dutchman is going into its fifth consecutive Olympic Games, having made its first appearance in 1960. Highly complicated and technically demanding to maintain as well as to sail, the Dutchman also requires great agility from its crew. Course sailed Olympic. Total race distance approx. 10.8 nautical miles.







**KINGSTON  
1976**

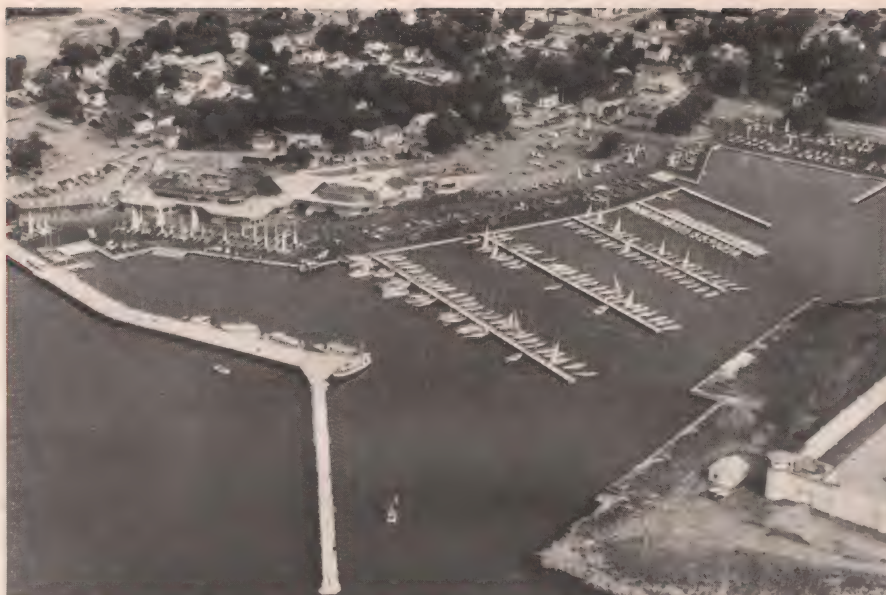
**From Europe, Jack Knights provides the background on the formidable challenges that will come from there, and also gives some ideas on who could finish at the top of these very fine fleets . . .**

There is one fact you should know about this Olympic Regatta and that is that more people are taking more trouble to win these few medals made of impure metals than ever before. The intensity of preparation which now is regarded as normal would, a few years back, have seemed eccentric.

As late as 1936 the Olympic yachting regatta was, for its competitors, one more event to be sandwiched in between other fixtures. One Six-Meter at Kiel in 1936 broke the same jib sheet shackle in two different races and carried away her spinnaker halyard cleat in a third. She still went on to win the gold medal.

At Kingston, if any boat breaks anything there is likely to follow a national team enquiry plus a search for saboteurs. Race places lost in this way are unlikely to be regained. As ever, the Olympic fleets will be of uneven standard, with less depth than in a world championship event, but at the top of each fleet, striving with daunting intensity to be first, will be more superlatively built, rigged and handled boats than ever graced an Olympic regatta. And don't expect the winners to come from the customary ranks of the semi-pros and boat bums; the guys who flit from one regatta in one part of the world to the next, making sails or deliveries in between.

The winners will come from the new breed of Olympic specialists. Mostly in their 20s, their careers still before them and their education temporarily halted, they are people who are sufficiently obsessed to be able to shut from their minds every other part of life but the



narrow laser beam which cuts through and past all practical considerations and focusses on a single idea—to win the Olympic regatta of their chosen class.

You see this escalation of competitiveness, most clearly in the classes raced by the youngest—the Finn, 470 and Flying Dutchman. And you probably see it most nakedly exposed in Europe, for it is here that international competition is woven most closely into sailing.

Since the 1972 Games at Kiel, there has been a marked growth in nationalism. This is because the less well organised teams at Kiel saw and admired the better organised and decided then and there to copy them—whether or not all the obvious trappings of team organization actually produced the less obvious matter of success.

Today no self-respecting sailing nation can afford, for its own self esteem, more than anything, to be without at least one team motorboat, one coach or manager, one weatherman, one physician and various helpers. The French have coaches for each class—and motorboats too. Theirs has become a minor industry. The East Germans appear to be the most effectively mobilized team, and is one of the few that really has been able to help its sailors and increase their success. Their first real breakthrough was made at the 1974 World Flying Dutchman Championship at Weymouth, England, when they took three of the first five places, including the title. And they did it using the same well-worn sails, all through a windy week.

The East German FD sailors did best at Weymouth when it blew hardest and the same is true of their Soling crews. This is the result of continuous crew drilling. Perhaps the most significant factor in their 1974 FD world title

success was that afterwards the competing crews sailed over to their coach's boat and threw the coach in the water. Thus did they show where they believed the real reason for their success lay. This coach had been methodical in his training. By setting one boat against another, by switching sails and changing tune, one item at a time, he really had been able to discover what made an FD tick.

Most of the successful crews in the Olympic classes are now tuning in this way, using another boat as a pace horse. And it isn't in the least bit necessary to have a big and rich national sailing team to arrange it. In fact, many top competitors are so individualistic the only time they come near their national rivals is when they have to, to compete for grants or team selection. They would rather avoid confrontation with their national rivals and prefer to pace against sailors from elsewhere.

David Howlett, one of the best bets for a Gold in the Finns at Kingston, tunes up privately against Nick Oundjian, an English Canadian who sells carpets for a living and manages to save almost as much time for his sailing as does Howlett himself, who is a sub-lieutenant in the Royal Navy and who has been on fully paid leave for the last few months. They sail together and jog together in and around Chichester Harbour.

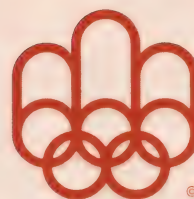
Another famous helmsman who is similarly motivated and who was also previously a sub-lieutenant in the Royal Navy is Rodney Pattisson, winner of the FD class at Acapulco in 1968, at Kiel in 1972, and is as hungry to win today as ever. Pattisson's example probably taught the East German coach the value of organised training. Pattisson was the first, to my knowledge, to go to the trouble of setting up two FDs to be as identical in every respect as it was humanly possi-



ble to make them. Then he would give one to one of his few respected friends (one who did not normally race a FD) and the pair would sail and sail and really find out what happened when mast rake was changed or a fuller genoa substituted for a flatter or a radial head spinnaker tried. Pattison was not above admitting publicly that he didn't like racing with the rest of the British because it only taught the others how to go faster.

Perhaps this attitude is a direct product of the British method of Olympic selection—sudden death—or glory—in a single week of trial races as near the date of the Olympic regatta as is

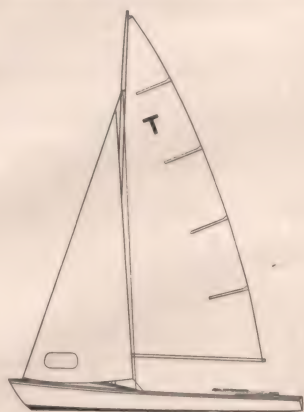
practical. In Europe Britain is almost the only country to persevere with this system. At the other extreme is West Germany which has been selecting its team for 1976 in a war of attrition that began at least three years ago and which takes in, for each crew, about 10 scoring regattas. No wonder the West German crews find smiling so difficult. They haven't been able to take a risk in a race for two years or more. Every time they try a new sail it is with heart in mouth. Only recently and only in some classes, when it had become pretty obvious who the Olympic choice was going to be, have the others been able to enjoy their racing again for a few



**KINGSTON  
1976**

months—before the runup to 1980 begins in 1977.

The French like to think they have got their Olympic selection process



#### **Tempest**

Two-man keel boat with trapeze. Length 22' 11", weight 1,000 pounds, sail area 572 square feet (total). Designed by Ian Proctor (Great Britain) in 1966. Cost \$8,500 (complete). Construction fiberglass. World registration 700, United States registration 150. Countries expected to compete at Kingston 26.

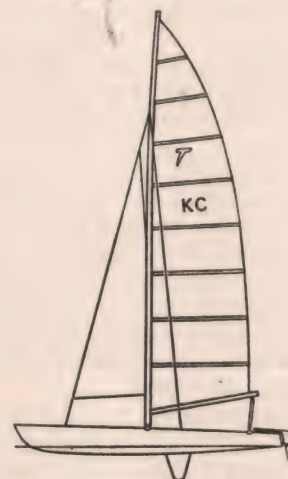
Making its second consecutive Olympic appearance, the Tempest is known to be physically demanding and capable of rapid acceleration. Not sailed in great numbers in the United States but is popular in Europe. Course sailed Olympic. Course distance approx. 10.8 nautical miles.



#### **Soling**

Three-man keel boat, Length 26' 9", weight 2,230 pounds, sail area 556 square feet (total). Designed by Jan Linge (Norway) in 1964. Cost (complete) \$10,000. Construction fiberglass. World registration 2,500, United States registration 650. Countries expected to compete at Kingston—33.

A handsomely proportioned boat, the Soling is in its second consecutive Olympic Games. Though it is a displacement boat, it has sufficient latitude in sails and flexibility of rig to make it very responsive to good sailing skills. Course sailed Olympic. Course distance approx. 10.8 nautical miles.



#### **Tornado**

Two-man catamaran, centerboarder, length 20', weight 315 pounds, sail area 235 square feet, designed by Rodney March (Great Britain) in 1966. Cost (complete) \$6,000, construction wood or fiberglass. World registration 2,500, United States registration 400. Countries expected to compete at Kingston—30.

This is the first Olympic Games for the Tornado. One of the most exciting boats to sail of any in the Games, the Tornado has tremendous accelerating ability. Highly sensitive to trim, the boat provides a test of both athletic ability and sailing skill. Course sailed: two triangles and windward leeward. Total race distance 14.64 nautical miles or 17.96 nautical miles on extended course with winds over 10 knots.







**KINGSTON  
1976**

right—and right they may well be. They are counting two meetings for each class with total Olympic points scored in both meetings. They believe this is the best way of assessing the comparative importance and difficulty of each.

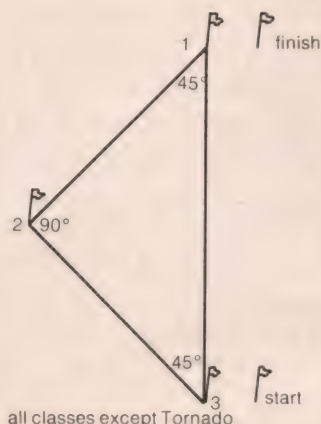
Most countries now operate schemes similar to the French and the principle is likely to gain more adherents before 1980 though a small minority of nations still prefer to choose their teams without any form of announced process. Such a country is Holland and the proof that this secret system is a bad system is to be found in the fact that one of its leading FD skippers, Fred Imhoff, is currently fighting the decision to choose the Vollebregt brothers in the lawcourts!

The Dutch, however, were probably wise to go with the Vollebregt twins. Jan and Sorg are young, lean, athletic and compatible and backed by prosperous and enthusiastic parents. From their winning days in Flying Juniors and then 470s they have demonstrated a flair which the extremely consistent, professional, painstaking Fred Imhoff has not been noted for. But never mind. The essential thing about any selection process is that it should be seen to be fair. The best selectors are the ones that choose a selection method and then having chosen, retire to let the method pick the men. In Holland, as in Britain 10 years back, they prefer to meet in private. It wouldn't be so bad if Holland was a bigger country. As it is, every good sailor knows every other good sailor, and also knows his weaknesses.

As a direct result of the mobilization of European national teams and of the frequency of international meetings, European Olympic sailors have improved faster, generally speaking, than those from other parts. Evidence of this may be seen from the results, where competitors at the SPORT regatta in St. Petersburg then competed in the comparable Easter Week series at Hyeres, France, near Toulons.

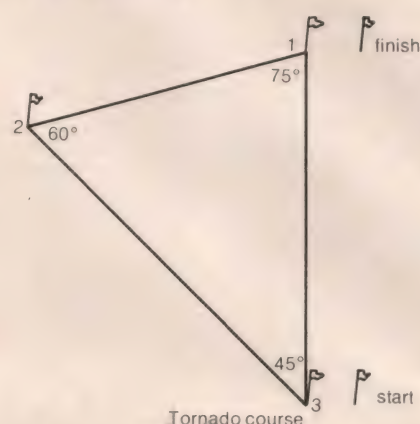
Thus the Australian John Bertrand, now working in the United States for North Sails, won SPORT in Finns by a comfortable 14 points, then came in sixth at Hyeres. Thus Hans Fogh and Evert Bastet won SPORT in FDs. At

## Olympic courses and scoring



all classes except Tornado

All classes except Tornado catamarans sail on an isosceles triangle with six legs. All marks are rounded to port and the sequence of rounding is as follows: Start, 1, 2, 3, 1, 3, Finish. Catamarans also sail a triangular course but angles at each mark are different. While all marks are rounded to port, the sequence is as follows: Start, 1, 2, 3, 1, 3, 1, 3, 1, 2, 3, Finish. If wind conditions are over 10 knots, the Race Committee can extend course distance by adding an additional two legs (instead of Finish, the course would extend by 1, 3, Finish). Flying Dutchman, Tempest and Solings all sail on Alpha course (windward leg two miles; total distance 10.8 nautical miles). Finns and 470s sail on Bravo course (windward leg 1.7 nautical miles; total distance 9.2 nautical miles).



Tornado course

Tornados sail on Charlie course (windward leg 1.7 nautical miles; total distance 14.64 or 17.96 nautical miles on extended course).

All scoring is done by low point basis over a seven-race regatta, with first six positions done by a fixed allocation of points (i.e., first place has zero points, second place three points, third place 5.7 points and so forth, in a descending spread of points.). Places beyond sixth place are scored by adding six points to the finishing position.

The winner is the boat with the lowest overall score for the series, and there is provision for one race (one's worst) not to count in the total score. Under the Olympic system, a crew gets more credit for moving from second place to first place than it gets by moving from 15th to 14th.

Hyerès this boat came in eighth. The one crew who won both SPORT and Hyeres, each time with a day in hand, incidentally, was Reg White and his brother-in-law John Osborn, and coming from Britain, they may be claimed as Europeans.

If one carefully studies world championship and similar results over a period of years it will be revealed that American sailors do best in keelboats and Europeans and Antipodeans in centerboarders. The results do bristle with exceptions but this is the more or less constant pattern. American John Marvin picked up a Finn medal against the odds at Melbourne in 1956. Peter Barrett did likewise. So did Buddy Melges in FDs. On the other hand you have the disappointment of the US Star crew at Kiel last time—and the success of Australian David Forbes.

My point is that there is more really intensive small-boat sailing in Europe than there is in America. In the United States the minority of real enthusiasts, those who jog before going to the office, must travel farther for their competition and they get it less often. In Europe there is so much of it that recently team members have been pleading with their coaches to be allowed weekends off. Yet a quite recent feature of international racing

has been the readiness of Americans, Canadians and Australians to come to Europe for a single series that does not need to be a world championship. At Hyeres, 30 countries competed and that is about as many as are likely to be at Kingston. This cross-pollination will quickly bring the slightly backward countries up to the level of the others.

Though much of Europe has come on strong in recent years, one side of it has lagged behind, a side that once was so successful in yachting. I refer to Scandinavia, land, not only of Paul Elvstrom but of Tore Holm and Ole Berntsen and a hundred other master helmsmen. Three years ago the Swedes dominated Finn sailing. Now they are lucky to get one man in the first six. With the exception of one Norwegian and one Danish boat they have yet to make a mark in 470s, and they certainly can't hold a candle here to the French. Stig Wennerstrom strives valiantly to uphold their reputation in keelboats and John Albrechtson with his Elvstrom sails seems to have unlocked the secret of Tempest success. But that is about the limit of it.

One big reason is that the southern European countries are now exploiting their longer season and also, I dare to say, their extra leisure. A friend cruising in Greece reported that every day



the Greek Olympic sailors spend hours afloat, practising. Remember that Hatzipavlis won a Finn medal in 1972 and observe that Boudouris was the third Finn at Hyeres. The same thing happens in Spain. Even in small places like Majorca and the Canaries, the local crews in the 470s have become really hot, simply by putting in sufficient practise. By contrast there is little the Scandinavians can do to unfreeze their ice and lengthen their hours of winter daylight.

Yacht racing is one of the chancier sports and chancy too is the business of forecasting the medal winners at Kingston, for much depends upon the weather. The wind velocities of last year's preOlympic's at Kingston took most by surprise. It seems that central Canada had been enduring an unusually hot summer and this heat generated storms and air movements of unusual intensity.

Is this likely to happen again? One imagines that the chances are less than even that it will. There probably will be rather less wind at Kingston for these Olympics than in 1975. If so, the lake sailors, the guys who like holding tillers and sheets between two forefingers, may yet have their day in court.

**Finn:** Britain's Dave Howlett has the capacity to go on improving. He is good in all weathers and he must start out as the gold medal favourite. There will be a great fight for the other medals — between Serge Maury (France), surprise winner at Kiel and now going fast again, John Bertrand (Australia) always a doughty competitor, the Russian, the East German and the Greek.

**470:** Probably this will be the most difficult Gold to win of all. 470 racing has become so close that sometimes they never can get started because of the eagerness with which boats come to the line. The French have been the pace setters but the British and the United States are pushing up, and there are all manner of others. Nobody stands head and shoulders above the top level standard.

The medal winners should come from among the United States, France, West Germany, Britain.

**Flying Dutchman:** This is the most intensive Olympic class on the material level and many of the leading contenders have been racing three different boats this season. Last year it was all Marc and Yves Pajot of France with their Kevlar boat from Lanaverre. But they can't use it at Kingston because of the Olympic regulations and either their replacement carbon fibre-reinforced boats have been actually slower or they *think* they have been slower, which amounts to the same thing.

So far they have had a poor season and are not back in medal form. But do

watch out for them if it blows.

Before the Pajots, and since 1968, Britain's Rodney Pattison dominated the class. He is back again with a special new boat and one of his favourite old crews, Julian Brooke-Houghton, but the brilliance only seems to come every fourth day or so now. Yet the stupidest thing to do is to write off this remarkable prickly man. Put him down as an outside medal chance.

Ever since I watched Joerg Diesch of West Germany, the young medical student from Lake Constance, win the World Fireball Championship in North Carolina, I have thought: here is a new world talent, particularly strong tactically and not overwrought, like so many of his young rivals, by the technical aspect of FD racing. He has been knocking on the door for two years, he is a lake sailor, he has a good temperament and a brother (Eckart) for crew who is physically ideally matched. Put them down for the Gold, windy or not.

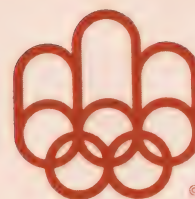
The Vollebregt brothers of Holland, Jock Bilger and Murray Ross of New Zealand, Hans Fogh and Evert Bastet of Canada and the East German crew will squabble over the other medals.

**Tornado:** Already this season Reg White and John Osborn of Brightlingsea, Essex, England, have won and won easily the World championship in Australia, SPORT in Florida, and Hyeres. Temperamentally, there is no reason why they should not continue in this vein (though last year they did tail off as the season wore on). On results, on experience, on hard work, on temperament they must be the first choice for the Gold in this class. Reg White's secret is that he has been sailing cats for 23 of his 40 years and building them for most of this time and he still delights in it. He exults in winning. There is no sign of the ennui of the hardened professional here.

Jorg Spengler of West Germany and the Prack brothers of Austria, both past world champs, will be pushing him the closest, and there will also be whoever sails the American boat, and the Australians, traditionally good in cats.

**Tempest:** Russia's Valentin Mankin, gold medallist in Finns in 1968, gold medallist in Tempests in 1972, is now back with a new boat, and lots of new sails. But there is no magic in his speed. He is having to work for every knot.

Al Warren and David Hunt, the British pair who got within a millimetre of the Gold at Kiel are back on the war-path too, but they haven't bothered to replace their seven-year-old boat and they haven't even bothered to practise all that much. At 41, David Hunt, maker of Needlespar Masts, doesn't get much of a kick out of trapezing any more.



KINGSTON  
1976

Count them in if it blows, out if it doesn't.

One highly experienced skipper who has recently climbed over the backs of these two leading crews of 1972 is John Albrechtson of Sweden. First he got himself in the six-foot six-inch 200-pound Ingvar Hannsen the world's most perfectly formed Tempest crew, then he hit upon an Elvstrom suit of sails that gave his boat that extra something upwind and down. And in spite of recutting and fiddling he still seems to have hung on to this precious extra something.

Guiseppe Milone, the 1975 world champ from Italy, seems to have been slightly overwhelmed by the renewed activity from this older and more experienced triumvirate. But he could strike — at Warren's expense.

**Soling:** Buddy Melges of the United States it ought to be, if he can get by the rest at the American Trials. Undoubtedly America's best helmsman, he is often overlooked because he, in turn, has overlooked the America's Cup, the SORC, the Congressional Cup, and most of the rest of the glamour events. Buddy manages to look very nonchalant about his sailing but this time he has been working hard at it. He was down in Florida in early spring for sail trials. He went back there soon after for victories that were much more decisive than is common in this class. The others have been left trying, first, to catch up with his sails, then to catch up with him.

If it blows he will have trouble from the East German, either Dieter Below or Roland Schwarz, and to a slightly lesser extent from the Russian, Boris Boudnikov, and from Poul Richard Jensen who now makes Fogh sails in Denmark.

Australian Dave Forbes, Star gold medallist in 1972 and preOlympic winner in 1975 at Kingston, had to struggle to win his own selection and did poorly at SPORT with a chartered boat. But do not write this man off.

You can be sure that at the front of all the Olympic classes this year there will be fantastic racing. Better than it has ever been before.



— Jack Knights



# TRADITION REBORN

workboats of the past become pleasure craft of today

by William A. Baker

Despite the growth of modern technology and the influence of the everchanging "modern look," lately there has been an unprecedented interest in building and owning replicas and modern adaptations of traditional American small craft. Using 20th century materials—fiberglass and polyester resin, epoxy adhesives, synthetic rope and sailcloths, a variety of metals—modern boat builders have found a wide market for boats that combine the handling qualities and appearance of earlier hulls and rigs.

The catboat, the Friendship sloop, and the Chesapeake Bay three-sail bateaux are just a few of these designs that have become popular with modern sailors.

Despite the use of materials and building methods totally beyond the imagination of early sailors and the wide variety of types undergoing a revival, all these boats have a single common heritage—they were originally work boats. They were boats developed to survive the hazards of weather and the sea while providing their crews with a means of making a living.

As pleasure boats they are sailed under far less demanding conditions where comfort, not mere survival, is at a premium and where enjoyment rather than a livelihood is at stake. Yet the qualities of these small boats that made them successful in their original employment endure in their regenerations: handiness, easy motion and suitability to local conditions. And to these qualities we might add another: their picturesque aspect that reminds the sailor at the helm as well as the viewer from afar of the seafaring heritage of which all sailors are a part.

As we see these modern adaptations or, even better, as we take their helm the history of their development is much a part of the boat. To know their origins can only increase our appreciation of these as well as the many other adaptations that have become so popular.

## **The Crotch and Lubec Pinkies**

The words Crotch Island can no longer be found on the charts of Maine's Casco Bay. It has not sunk or been washed away; genteel summer folk simply changed its name to Cliff

Island. Whatever its name the island was the home of one of the more striking of the many two-masted New England shore boats. So distinctive were these small craft that they have become a popular design for modern reproductions, many of them built of wood much in the manner of the originals.

In the late 1860s builders of double-ended shore boats became very active on Crotch, now Cliff, Island. Their products were usually called "Crotch Island pinkies," although their sterns bore but little resemblance to the kicked-up boom-crotch, seat-of-ease combination of the sea-going pinky schooner. In Maine, as in Holland and other European countries, the terms pink or pinky designated a boat with a sharp stern. These boats were also sometimes known as Casco Bay double-enders.

By 1880 these double-enders were powerful two-man sailing craft ranging in length from about 20 to 24 feet, too large to be carried on board a schooner but small enough to be easily hauled out on skids by their owners. Their displacements were relatively



David Scott

**CROTCH ISLAND PINKY**





## FRIENDSHIP SLOOP

small and they had fine lines for easy rowing, a must in the days before the introduction of the internal combustion engine. The bows of the pinkies were nearly wall-sided, an asset when sailing in cold weather, for such bows threw little spray and hence did not ice up so badly as the older rounded bow. The runs were long and flat.

The structure of a Crotch Island pinky was somewhat unusual, for it had a plank keel that was wide enough amidships to take the centerboard case. In some of the narrow-keeled New England types the board was off center passing through a garboard strake.

The late Howard I. Chapelle often wondered why so many US sailors chose to buy or build foreign types of double-ended cruising boats when several good North American designs are available. One of the popular foreign types is the Norwegian *redningskoite* (rescue sailing boat) designed by Colin Archer. These rescue boats are justifiably famous for their seaworthiness but they were intended to stay at sea with the fishing fleet and not necessarily to get anywhere in a hurry.

A double-ender that escaped yachtsmen's attention for a long time was often called an Eastport pinky but

also was known as an Eastern Carryaway boat, a Lubec boat, or, the designation we will use, a Quoddy boat, which derived this name from the region of its use, Passamaquoddy Bay. Now they are again being built as small cruising boats.

According to Chapelle, the Quoddy boat was considered drier, easier in a sea, and as fast as the Friendship sloop. The ancestry of these Quoddy boats, which were built in two sizes, is somewhat confused. They may have been developed from the local pinky schooner, a relatively sharp type, or they may have descended from keel double-ended menhaden boats em-





## CHESAPEAKE THREE-SAIL BATEAU

played on Long Island Sound in the 1870s.

Whatever their origin Quoddy boats came into use with the building of the sardine canneries in the 1880s at Eastport and Lubec, Maine, to carry the herring from the weirs to the factories. Passamaquoddy Bay is considered a relatively protected body of water in spite of the strong tidal currents and the fogs. Outside, strong winds from the southeast around to the southwest against an ebbing tide can quickly raise an uncomfortable sea; the coast is bluff and there are but few places of shelter. There are also patches of summer calms or light airs. The boats developed to meet these conditions had deep draft, considerable beam, relatively heavy displacement, and the large sail area needed to move such a hull.

The smaller of the two sizes of Quoddy boats—20 to 28 feet in length—was cat-rigged and its mast had considerable rake. Her sail, hoisted with a single halyard, had a relatively short gaff and was loose-footed on a boom. This size had a small cuddy forward but otherwise was entirely open with washboards and coamings along the sides. Occasionally in summer these cat-rigged boats set a jib flying from an easily shipped plank bowsprit.

The large sloop-rigged Quoddy boats ranged in length from about 30 to

40 feet and were decked craft. As in the smaller class there was a cuddy forward while amidships there was a large fish hatch and the helmsman had a standing room aft. These boats also had the short-gaff mainsail hoisted with a single halyard. On the stay leading to the outer end of the standing bowsprit this type set a loose-footed jib that slightly overlapped the mainsail.

### The Friendship Sloop

"I built the first Friendship sloop and I'm still building the only Friendship sloops there are!" According to the *National Fisherman*, these were the words of Wilbur Morse, who built sloops for fishing and lobstering from 1875 to 1924, mostly in the town of Friendship, Maine. It is interesting to recall, however, that back in the days when Wilbur Morse was in the middle of his boat-building career small sloops were employed all along the coast of Maine. While not quite as alike as peas in a pod, their characteristics were so similar that as a type they were known as "Maine sloops"; Friendship was but one of many ports where they were built. Further, the plans for a small "Friendship" sloop that have been published widely since 1950s are for a boat built by Abdon K. Carter in 1914 at Bremen, Maine.

Boats of any type have rarely been "invented"; at best one might agree that a certain combination of features

developed in a given location during a definite period of time. Fishermen have always been conservative and wary of changes until they have been proved useful. Perhaps Wilbur Morse's major contribution was the introduction into the boat-building field of what for its time was mass production, an average in good times of about two boats a month. The local fishermen and his market were never affluent and he and other builders could easily have priced themselves out of business. If the price was too high, the fishermen would simply have built their own boats, which is the way Wilbur Morse got started in the boat-building business.

The introduction of the gasoline engine soon led to the abandonment of many types of small sailing fishing boats. Those that offered the possibility of reasonable cabin accommodations were acquired by yachtsmen and converted. Thus a number of "Maine" or "Friendship" sloops were kept afloat until later generations could appreciate their qualities and begin building new ones. Fishing sloops converted to yachts, however, received unwarranted reputations as slow sailers. This was caused by an almost universal practice of reducing sail area by shortening the boom and bowsprit to make the fishing rig easier to handle for pleasure sailing.

### The Chesapeake Bugeyes and Bateaux

While the waters on the coast of Maine are relatively deep, those in Chesapeake Bay are mighty thin in places. The difference in the character of the water as well as the work called for different type craft. The original native craft on the bay were square-ended log canoes which, when adopted by the early settlers, were soon given sharpened ends. These log canoes were employed for about every conceivable pursuit. When the bay's supply of large single logs was exhausted, the settlers learned how to carve canoes from two or more logs pegged together. Sails and keels came later, but centerboards were not used until the 1850s. Some of the late sailing canoes are still raced on the bay.

The hazards of oystering in winter from an open log canoe led to the development of the brogan, essentially a log canoe with a two-masted ketch rig. The brogan had a small cabin forward, partial decks along the sides, and large hatches over the hold. Her masts were well raked and her sails jib-headed.

Following the Civil War, similarly rigged but larger log vessels were built and given full decks. These were the well-known bugeyes, some of which even as early as the 1880s had the normal frame and plank construction. The after mast in a bugeye was often nearly



as tall as the forward and in bay terminology they were the "fore and main" masts. Bugeyes were registered as schooners and a few carried a two-masted gaff-schooner rig. In a further confusion of terminology these were called "square-rigged."

Although so widespread as to seem indigenous, chine-built boats are relative newcomers on Chesapeake Bay. Small flat-bottomed boats may have been used as early as the middle of the 19th century, but the well-known vee bottom usually associated with bay craft did not appear until the 1880's, being an importation from the north. It has proved a popular low-cost form for both pleasure and work boats.

Outside of the Chesapeake Bay region a large decked vee-bottom boat rigged with one raking mast carrying a simple jib set on a fixed bowsprit and a low-aspect jib-headed mainsail is commonly called a skipjack. To baymen, however, "skipjack" means only the rig. The vee-bottom hull is known as a "bateau" and in this case specifically a "two-sail bateau."

Two-sail bateaux have ranged in size from about 20 feet to about 60 feet in length on deck. Up to about 30 feet in length they have been half decked and above that, full decked. All but the smallest bateaux have a small house forward with two berths and a stove. Although of simple form, a graceful sheer line and the typical bay cutwater and head structure combine to give the bateau a pleasing appearance.

The primary employment for these bateaux has been in dredging for oysters, but many have served as farmers' boats. In order to have the power needed to drag an oyster dredge their rigs have been large. Several rows of reef points in both sails gave the ability to shorten down in strong winds.

The strongly raked mast has two advantages, the first being that the rake allows the mast to be stepped well forward, giving more unobstructed deck space for handling oysters. The second is that the center of effort changes but little when the sails are reefed, far less than the shift with a vertical mast.

Bateaux fitted with the two-masted bugeye rig became in bay parlance "three-sail bateaux"; with smaller sails to handle such craft could be operated with smaller crews than the two-sail bateaux. Because of this feature three-sail bateaux have proved popular as yachts on Chesapeake Bay and have been constructed by a number of builders in a variety of sizes. The oyster-handling space between the masts on a work boat gives ample room for a long house and good accommodations when the design is adapted to pleasure sailing, although the shallow draft and vee bottom with

little deadrise means minimum headroom below.

### The Catboats

In 1894 Lewis Herreshoff, a brother of Nathanael Greene Herreshoff, wrote a survey article on yachting in America in which he mentioned "the ubiquitous cat-boat." In this bicentennial year the number of one-sailed boats is such that the term "ubiquitous" still could be applied to them. Although one sail is a quality of a catboat, all one-sailed boats are not catboats, for hull shape has a bearing on the definition. Lewis Herreshoff went on to note:

*The respect of all dwellers on the shore is due to the cat-boat. She is distinctly American, and whilst her use may be more and more circumscribed, still the old cat will live and continue to fill a place that no other rig could do. But the catboat in the usual acceptance means something more than its simple rig; it stands for a shallow, wide boat, with one mast crowded into the extreme bow, and a boom reaching far over the stern...*

The origin of what Lewis Herreshoff and sailors today recognize as a catboat is unknown. During the first half of the 17th century the Dutch employed small craft—some open, some decked—that had but one mast and one sail; this sail might have had a short gaff hoisted with a single halyard or it might have been jib-headed.

Whether the Dutch small single-sailed craft in New York waters had any influence on what led to today's catboat, lower New York Bay was one of three regions in the United States where the shallow, wide hull with a single sail developed. The other two were Narragansett Bay and Nantucket Sound.

In New York waters shoal-draft centerboard boats were developed in the 1830s for the inshore fisheries. These were half-decked craft with two mast positions so they could sail as cats during the winter and sloops at other times. Employed during the autumn, winter, and spring in fishing and oystering, many carried sailing parties of guests from the New Jersey beach hotels during the summer. The fastest of these boats often raced in New York harbor where, if successful, their fishermen-builders could obtain fancy prices from yachtsmen.

The racing of these fishing boats led to the development of the extreme and dangerous sandbaggers. While fast in smooth water and moderate winds, they were unsuitable for exposed conditions and strong winds. The descendants of these fine-lined racing catboats survive today, mostly on the shoal waters of Great South Bay and Barnegat Bay where their lively performance continues to have appeal.

When boats of the New York model moved eastward to locations where fishing was done in more exposed waters, it was found that heavier and deeper hulls were needed. As in New York waters some were fitted with the cat as well as the sloop rig. By the 1880s there were Newport catboats, perhaps the oldest of the type east of Long Island Sound.

During the 1870s and 1880s small keel catboats were popular with the boatmen in the towns at the head of Narragansett Bay. One might think that this type with a centerboard could have been an ancestor of the present-day catboats, but by that period centerboard cats were sailing out of Newport as well as the ports on the southern shore of Cape Cod where the term Cape Cod cat became the common label for a wide variety of similar designs.

According to tradition the first catboat built on Cape Cod appeared about 1857 and was said to have been an improvement on the Newport type. This first boat and her sisters that followed found favor with the fishermen and the numbers multiplied. The waters along Cape Cod and off-lying islands were shallow, requiring shoal draft, centerboard-fitted hulls. The early Cape Cod cats had moderate beam, considerable deadrise with easy bilges, and relatively small sail area. While a nearly vertical transom with an outboard "barn-door" rudder are features of Cape Cod catboats, some of the early working cats had short overhanging sterns formed by raking the transom and allowing the head of the rudder post to come up inboard.

As the Cape Cod cat developed and was adapted for racing, the deadrise was reduced and the bilges hardened. To drive the heavier displacement hull, the area of the single sail was increased, for the catboat is not particularly suited to the carrying and handling of light sails.

Faults found in the large overrigged racing cats are not inherent in the type, for fishermen found the earlier versions suitable for work in exposed waters even in heavy weather. With crews of two, catboats often went far offshore with relatively few losses.

Thus the craft of the past live on, not merely in restorations but in modern adaptations that in small but growing numbers form a marked contrast with highly stylized contemporary designs. Some have called them character boats, other replicas, often in a pejorative sense as if somehow the past cannot be relived. Yet many of these craft combine the best of two eras: the charm of the past with the materials of today.





## keelbolts and sailplans

# Time of Wonder



### Designer: Edward S. Brewer

*Time of Wonder* was to be based on the 100-year-old schooner *Dove* originally, but the new boat is some 25 percent lighter because of the use of modern building techniques and, of course, the fact that she is not intended to lug around five tons of fish. This enabled us to develop a hull form with considerably finer lines, particularly forward, and resulted in a prismatic coefficient of .56. I consider this figure ideal for a well canvassed hull that will be sailing in a breezy area and spending a lot of her time at higher speeds.

Another major change was in the relationship between center of lateral plane and center of sail area. *Dove* had a negative lead of about four percent of her LWL and in our experience this is bound to create a weather helm that would rupture a gorilla. Phil Burling, *Time of Wonder*'s owner, wanted a more elaborate sail plan with double headsails and we, again, took the opportunity to make changes. The hull "chin" is rounded off to move the CLP aft while the sail plan was altered to result in a lead of about 10 percent. This, I feel is necessary for an easy helm and results so far have borne this out.

Another big difference between the two boats is *Time of Wonder*'s generous ballasting, creating stability that *Dove* could never have had and that enabled us to increase the working sail area from 1,096 to 1,297 square feet.

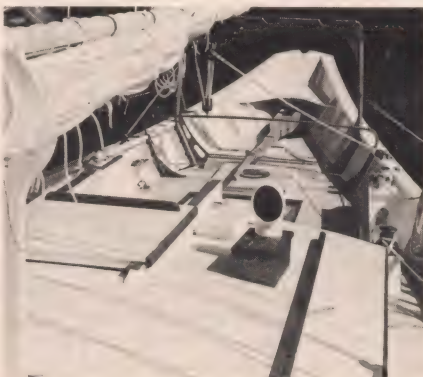
Although the two boats would look much like sisterships if floating side by side, there is no doubt that *Time of Wonder* could sail circles around *Dove* because of the former's lighter displacement, finer hull, higher ballast

ratio and larger sail area. That is as it should be since she is a pleasure yacht and not a working vessel.

The final major differences are in *Time of Wonder*'s accommodations and construction. *Dove*'s crew would envy the new boat's comfort and, in the spring, they would envy the low maintenance of the Vectra-covered, strip-planked hull with its fiberglass covered decks and deckhouses. This construction has been used by Penobscot Boat Works on many of their 32-foot Quoddy Pilots and has proven to be durable and tough over many seasons of sailing under all conditions.

The plans do not reflect a few later changes in the accommodations. Primarily, the aft cabin was altered to include a permanent berth to starboard in place of the lockers shown. The layout seems to have worked out quite well and should prove to be very comfortable for family cruising.

*Time of Wonder* is an unusual boat in these days of plastic floating dormitories and it has been a real pleasure to have the opportunity to work on such a craft for an owner who knew exactly what he wanted, and a builder who knew how to put it all together.



*Time of Wonder's pinky stern and cockpit blend comfort and function. Note comb under tiller whereby tiller can be set to let Time of Wonder sail herself*



# a pinky schooner for today

## Comment by Bruce Bingham

Owning a schooner must be a love affair, one which is blind to the impractical, particularly with regard to the difficult handling of the rig and the slowness of response because of the long underbody.

So it is that I suspect that such a love existed on the part of the designers, owner and builder from the day the first lines were drawn. Fortunately, for the character of the ship, little attempt has been made to modernize her upper workings or to polish her finish. Only a couple of sheet winches have been added to *Time of Wonder*. The profusion of delicious detail such as dead-eyes, mast hoops, carved trailboards, pinked stern and long sweeping tiller make this tidy vessel a prime candidate for much more than a second glance.

My only complaint visually is in her accentuated freeboard. Photographically (at least), she does not appear to be as low slung as is depicted in her sail plan, solely because of the lack of painted contrast along her wale. Yet, in all, *Time of Wonder* can be summed up as a graceful, yet powerful example of her sailing heritage: not clumsy but not too "yachty".

It is really down below where Brewer has applied his versatility and ingenuity. *Time of Wonder* is a drastic but sensible departure from the normal, hacked-up split-cabin schooner layout.

A full standing "walk-through" has been provided between the fore and aft compartments, evidence of her slack bilges. This avoids the gyrations typically encountered aboard boats of this type when a person is moving from one end of the boat to the other. Here, one need not bend over double simply to make his way to the head or to hand foul-weather gear.

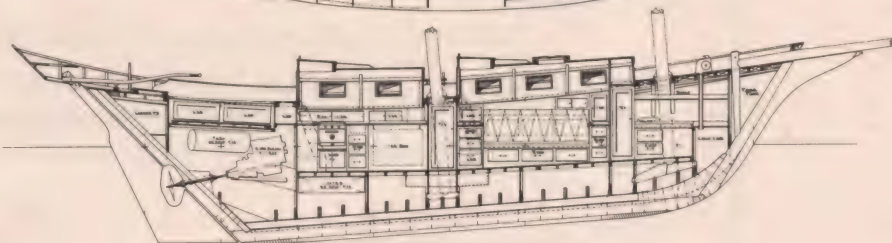
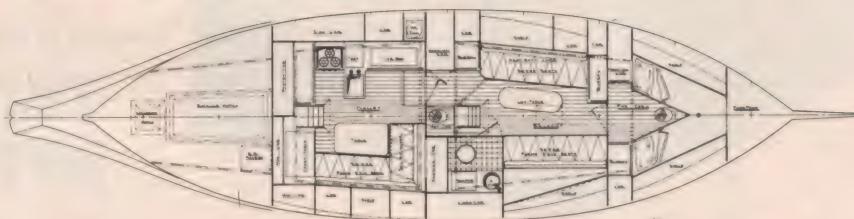
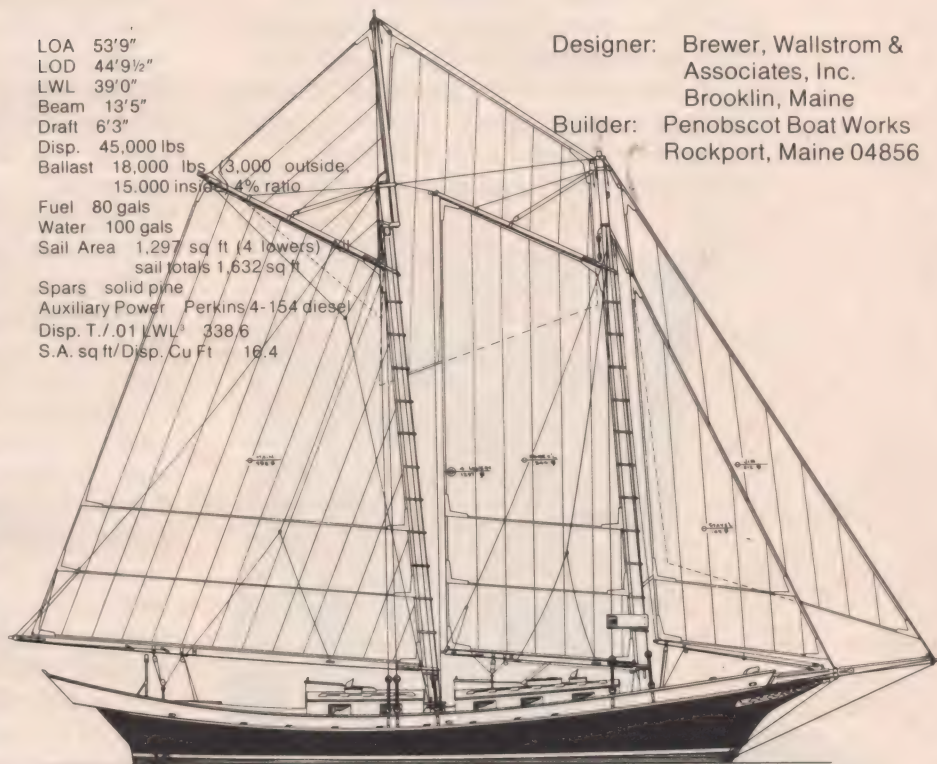
Her same full garboards have also allowed for an ample aft-cabin sole and, hence, a cavernous compartment for the galley, dinette, and navigation station without the clumsy intrusion of an engine box. In the same area, you will see many other pluses: the living/lounging space is near the cockpit so that the privacy of the primary sleeping quarters is not infringed upon by the hustle and bustle of working the ship or by the relaxing off-watch.

The chart table, tucked neatly out of

LOA 53'9"  
LOD 44'9 1/2"  
LWL 39'0"  
Beam 13'5"  
Draft 6'3"  
Disp. 45,000 lbs  
Ballast 18,000 lbs (3,000 outside, 15,000 inside) 4% ratio  
Fuel 80 gals  
Water 100 gals  
Sail Area 1,297 sq ft (4 lowers) sail totals 1,632 sq ft  
Spars solid pine  
Auxiliary Power Perkins 4-154 diesel  
Disp. T./01 LWL 338.6  
S.A. sq ft/Disp. Cu Ft 16.4

Designer: Brewer, Wallstrom & Associates, Inc.  
Brooklin, Maine

Builder: Penobscot Boat Works  
Rockport, Maine 04856



the traffic pattern, may serve equally well as the ship's office or a dining buffet while in port. The galley is cozy but extremely workable, profuse with a variety of storage systems and surrounded by envious counter space. With the L-shaped settee opposite, the result is a warm and workable arrangement.

The forward cabin I find just as inviting. The two bureaus at the ends of the port settee are not only a rare and con-

venient feature but also add to the feeling of openness and space. The forepeak boasts the same detail. And the boat is hardly lacking in drawers and cabinets.

The Vectra-covered strip-planked hull is an effective alternative to traditional construction with easier maintenance time combined with a smooth, fast bottom and dry bilges for many years to come.





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# Reconsidering the Yawl Rig

Donald M. Street weighs the advantages for modern cruising

**T**he late Bill Snaith, one of the all-time great racing and cruising skippers, took a rather dim view of yawls. According to Snaith, the mizzen is good for a number of things: it gives the navigator something to lean against when he is taking star sights; it supplies strap hanger-support for the skipper while he is giving unnecessary advice to the working members of the crew; and it is a backrest for the helmsman to lean against and relax when he should be concentrating on steering. Further, it provides the ideal place from which to fly the owner's private signal and, most important, from the mizzenmast one can hang a mizzen staysail, which is basically a psychological weapon to be wielded against owners of sloops and cutters.

The yawl rig was once more popular than it has been in recent years. Under the Cruising Club of America Rule the mizzen staysail area was "free," sail-plans were lower, and racing the cruising boat (rather than the less feasible modern alternative of cruising the racing boat) was the fashion.

While the ketch rig enjoys a revival of sorts, few of today's cruising sailors consider the yawl rig. As an owner of a boat converted to a yawl a dozen years ago and as a skipper with a lifetime of offshore passages under a wide variety of rigs, I feel that the case for the yawl rig needs re-telling. For medium-sized cruising boats—say 40 to 50 feet overall—the proper yawl rig has advantages that may outweigh the added cost, structure, and complexity of another spar. Above and below this size the decision about what is the best rig would be subject to a careful analysis of the owner and his crew's abilities and inclinations, and the type of cruising the boat is expected to do.

By a properly rigged yawl I mean a yawl with independently stayed masts so that the loss of either mainmast or mizzenmast will not weaken or carry away the other. The loss of the mizzen

alone will not affect the safety of the boat; she will sail satisfactorily without it. If the main is lost, hopefully, with the aid of the mainboom and spinnaker pole a backwards schooner can be rigged.

A properly rigged mizzen on a yawl should have no running backstays, even though a mizzen staysail will be used. If the mizzen is rigged as shown in Figure 1, upper shrouds serve not

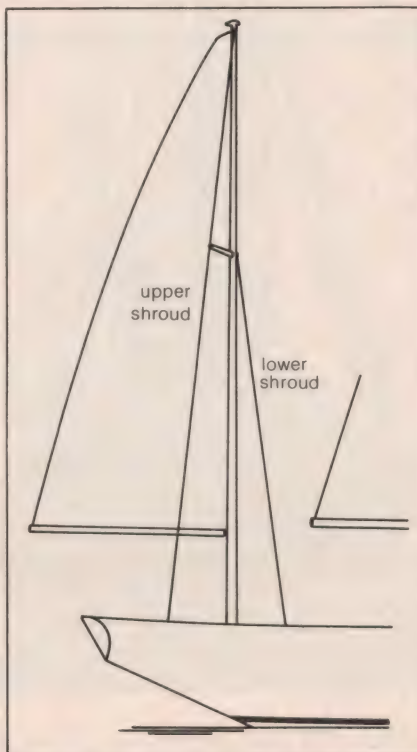


Figure 1: By locating upper shrouds aft of mizzenmast and lower shrouds forward, the mizzen receives fore-and-aft support without need for running backstays

only as shrouds but also as backstays, the intermediate shrouds serve not only as shrouds but also as headstays. Occasionally, when you are pushing a boat hard and carrying the mizzen staysail longer than might perhaps be

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John Quinn





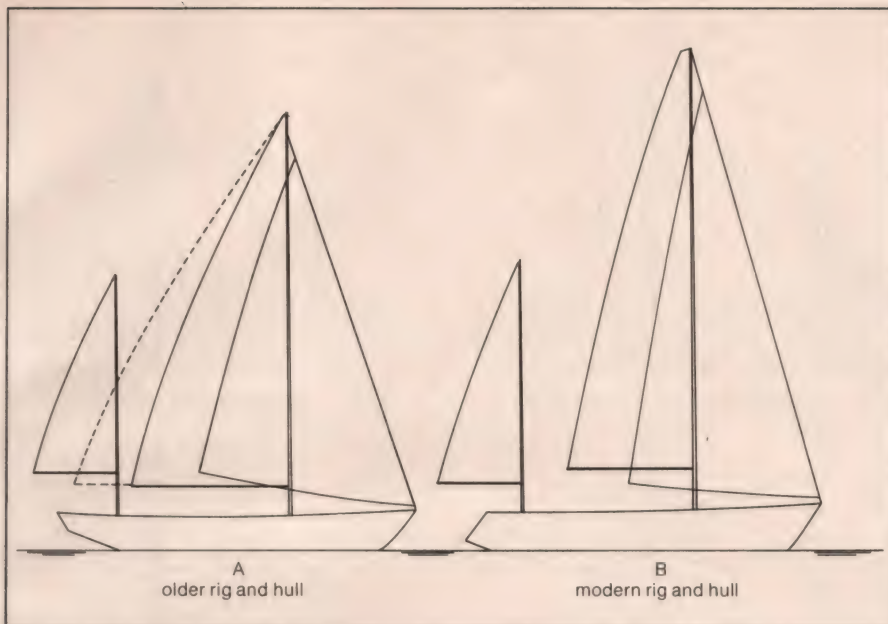


Figure 2: Lower aspect rigs with longer booms (A) may have to have boom shortened and mainsail area reduced to accommodate mizzen, whereas more modern higher aspect rigs (B) have room aft of boom for mizzen

prudent, the mizzen halyard can be used as a temporary backstay. Even then, though, it should not really be needed to stay the mast, just to allow the skipper to sleep a little more soundly.

To qualify as a yawl the hoist of the mizzen is usually less than 60 percent of the hoist of the mainmast. More to the point, the mizzen should be of adequate size to hold the boat's head up into the wind. The exact size will vary from boat to boat. On my *lolaire*, with her long forefoot and relatively low freeboard, a mizzen of 80 square feet is nine percent of her measured sail area and has worked out excellently. On more modern boats with higher freeboard and hence increased windage, cut-away forefoot, and small keel, the mizzen would probably have to be substantially larger—probably 15 to 18 percent of the measured sail area.

The mizzen should be well stayed and of a size that makes it possible to leave it set while hove-to in a gale. If the mizzen is to be really effective in heavy weather, it should definitely have either a set of reef points or be capable of being replaced by a storm mizzen. If extensive offshore cruising is to be done in rough areas, a spare storm mizzen can be most useful. The working mizzen is frequently left up at the mooring to steady the boat and, therefore, this sail receives more than ordinary wear and tear as well as exposure to sunlight, all of which eventually weaken the stitching and the cloth. Should the weakened sail blow out when being used as a storm sail, you have lost the most valuable sail when it is most needed. Carry a storm mizzen of heavy Dacron, flat cut with a hollow

leech and no battens. As it is seldom set it should remain in good condition and it is small enough to be easily stowed.

Finally, the end of the mizzen boom on a proper yawl should be easily reached from inside the stern pulpit. Who wants to hang over the stern, working on the clew outhaul or mizzen staysail sheet in danger of going over-side in heavy weather?

Converting the average sloop or even cutter to a yawl rig is usually not too difficult. The design can be done by any competent naval architect. In older boats it usually requires substantially shortening the mainboom (Fig. 2A). In more modern boats their short booms may permit stepping a mizzen with no changes either to boom length or sheeting arrangements (Fig. 2B).

Conversion of a sloop or cutter to a yawl may offer definite advantages.

In light airs and a sloppy sea it is not at all unusual for the modern sloop or cutter to suffer from lee helm, a problem that may be solved by conversion to a yawl as the mizzen tends to hold the head up. As wind picks up and weather helm develops, it is simple enough to douse the mizzen. With a further increase in wind strength the solution may be to reef the main to reduce sail aloft and heel angle while resetting the mizzen to balance the helm. Thus the mizzen becomes the means of keeping the helm balanced under varying sail combinations in varying amounts of wind, a feat more difficult with a less versatile sloop or cutter unless it has a centerboard that can be raised or lowered to help balance.

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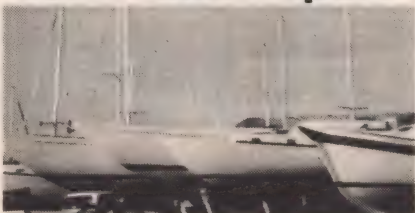
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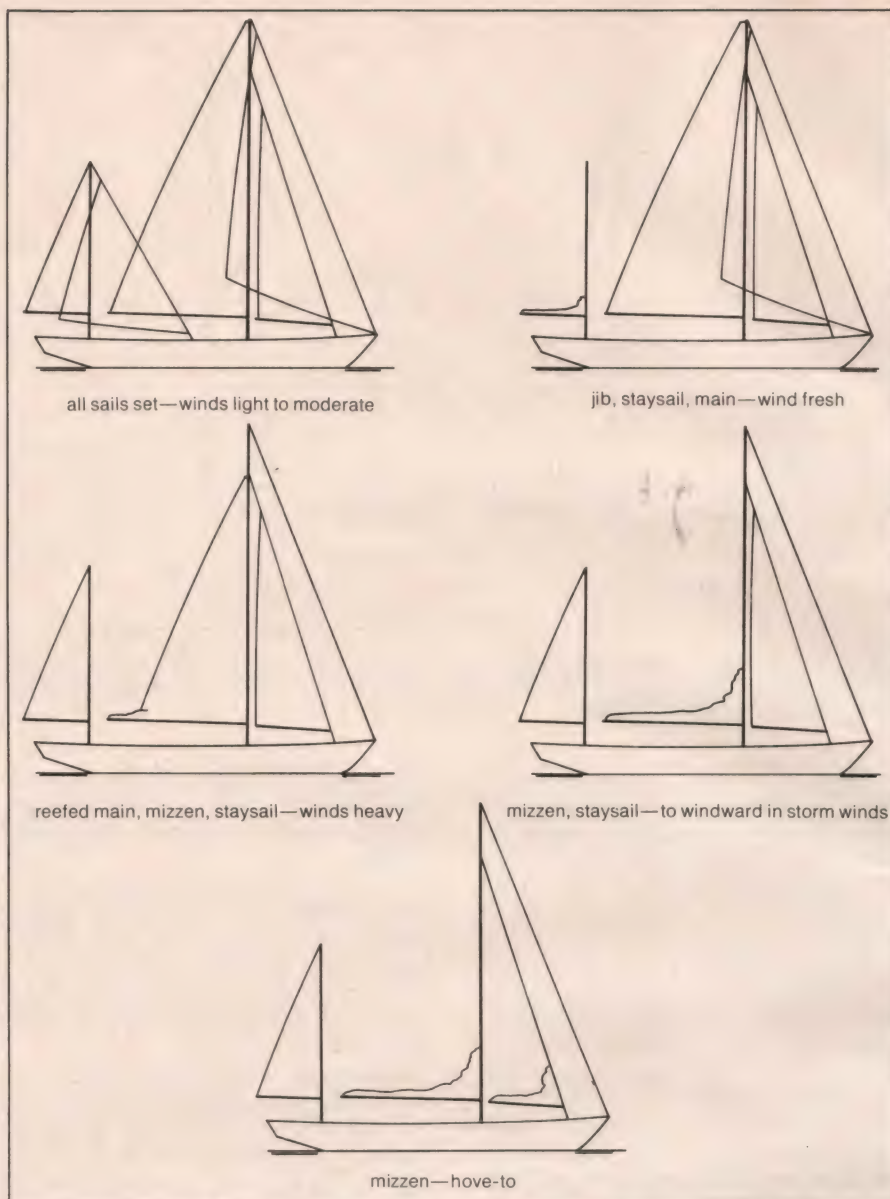


Figure 3: The sequence by which sail may be reduced on a yawl, indicating the versatility provided by use of the mizzen as a means of balancing the rig

double-headsail rig, easily reefed mainsail, and a mizzen, has tremendous flexibility for varying conditions (Fig. 3). When it begins to blow up the mizzen is doused and she remains balanced. As it blows up more, the main is reefed—a good deep reef—and the mizzen is set. As the wind increases more, with the mizzen doused, under staysail and reefed main, a yawl will take a real hatful of wind up to storm. An alternative if you are trying to slog to windward is to drop the main and use staysail and mizzen, a low sailplan that saves wear on the mainsail.

In heaving-to with a yawl the mizzen is sheeted hard down and the helm secured alee, the angle of the rudder, of course, depending on sea conditions, the amount of wind and the shape of the boat heaving-to. A proper yawl with an adequate-sized mizzen should lie about five points or at the

most six points to the wind with minimum rolling and gentle pitching, an infinitely more seamanlike method of heaving-to than lying ahull.

Under more moderate conditions one of the great advantages of a mizzen is that it allows one to hang out a mizzen staysail not merely to intimidate skippers of sloops but to make light-sail setting easier for a short-handed cruising crew. On a reach, a mizzen staysail is easier to handle than a larger genoa or a spinnaker. In squally weather when we are reaching on *Iolaire* we carry a large #1 jib, staysail, reefed main and mizzen staysail. When squalls approach, we douse the mizzen staysail and roll up the jib as we sail through the squall under reefed main and staysail, resetting the jib and mizzen staysail when the squall passes. The procedure is much easier than continually having to reef and shake out a reefed mainsail.



On most yawls the mizzen staysail is roughly two thirds the area of the mainsail. Handling the mizzen staysail under normal conditions is little trouble—attach the tack at the weather rail, attach the halyard, haul up the halyard tight, then adjust the sheet. Taking it in in normal weather is no problem—slack off the halyard and hold the sheet as one person gathers it in until it is muzzled; then the sheet is slacked and the mizzen staysail packed away in its bag. It helps if the mizzen staysail bag has a hole in the bottom through which the tack protrudes. Thus the bag is always left attached and the staysail can be bagged before the tack is detached.

In heavier conditions, especially with a large mizzen staysail set while you are running broad off, the problem of dousing the staysail is more acute. Under those circumstances, as the halyard is slacked off, the mizzen staysail plasters itself up against the mainsail, and it is a tough fight to pull it on down. On anything but the smallest yawls it is well worthwhile to consider attaching a jackstay to the bottom of the mizzen staysail halyard block (Fig. 4). The jackstay is normally coiled across a couple of wooden cleats at the base of the mizzenmast, but when the mizzen staysail is to be set, the stay is taken forward and secured to the same tack point as is normally used for the mizzen staysail.

The mizzen staysail is then hanked to the jackstay by several snaps in the manner of a headsail, and hoisted. The jackstay permits lowering the staysail with the same degree of control as a headsail on a stay, keeping the sail off the mainsail.

The advantages of the yawl rig are also readily apparent when you are sailing in tight quarters. The addition of a mizzen will increase the handling ability and maneuverability of any sloop or cutter by using the mizzen as an air rudder. Backing the mizzen to windward flips even a long-keeled boat round on the other tack almost instantly. Sheetting it flat also reduces the tendency of the head to fall off after tacking as the boat tries to regain speed.

When you are luffing up to set an anchor, the mizzen may be backed alternately side to side, becoming a brake. Once the anchor has been dropped, if you back the mizzen and steer in reverse the bow can be kept head to wind and the boat sailed backwards, while you are setting the anchor. This is a far cry from the sloop or cutter which, upon losing way, tries to do a 180-degree turn and present her stern to the wind, sometimes fouling the anchor rode on rudder and or prop.

At anchor, if the mizzen is sheeted

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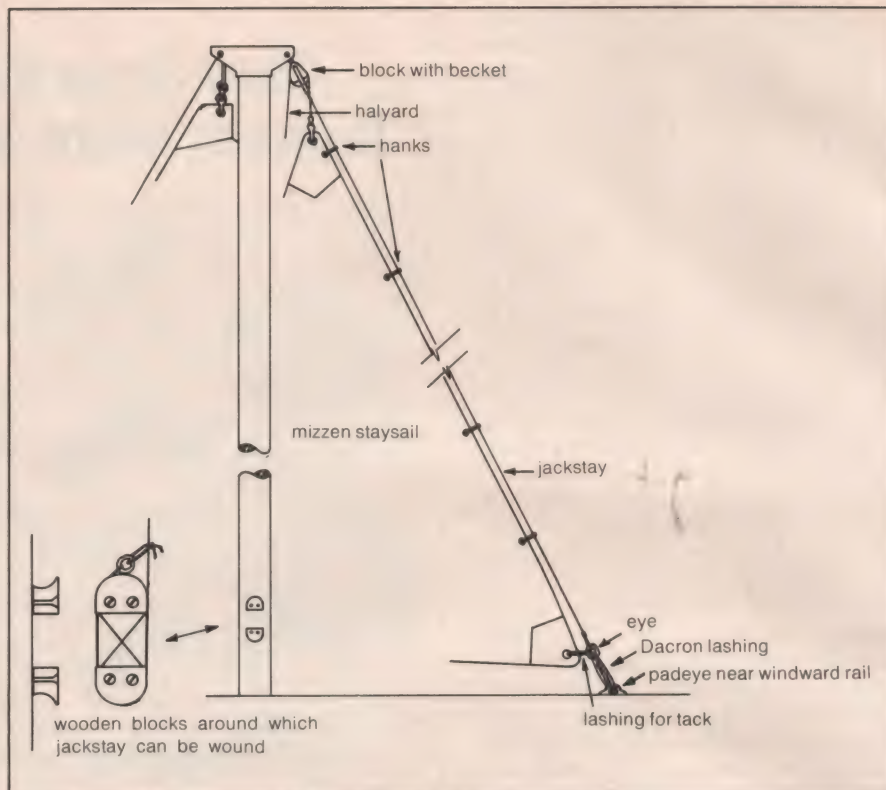


Figure 4: Setting the mizzen staysail with hanks on a jackstay makes setting and lowering easier than if staysail is set flying. When not in use, jackstay is secured around shaped wood blocks on side of mizzenmast

flat, the boat tends to stay head to wind, preventing her from charging around and sailing her anchor out. In anchorages where a swell is present, the mizzen sheeted flat also dampens the roll considerably.

When you are picking up an anchor under sail the mizzen can be of additional help. To sail the anchor out with a sloop or cutter the mainsail often requires a headsail in addition to the mainsail, the headsail being backed to throw the bow off. In the series of short tacks the boat needs to sail up over the

anchor; the crew on the foredeck is attacked by the headsail, headsail sheets or the staysail club. However, with a mizzen to help in throwing the head off, the headsail is unnecessary.

Both the main and the mizzen are hoisted and the main is sheeted flat, then the mizzen is backed hard to port or starboard while the anchor line is slacked 15 or 20 feet. As the head falls off, the mainsail fills, and mizzen is allowed to luff as the boat gathers way. Once she has worked her way well out to one side of the anchor, the mizzen is

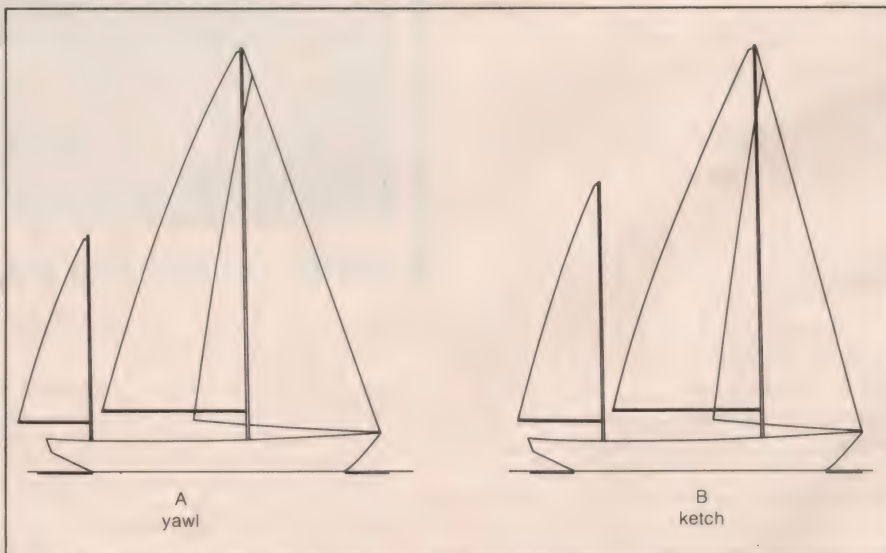


Figure 5: With mainmasts of the same height the yawl (A) has more sail area while the ketch (B) sacrifices either mainsail or foretriangle area as well as efficiency to windward.



backed hard to windward, the boat tacks and sails in the other direction. At the end of three or four tacks, the yawl is up over the anchor, the rode is snubbed up tight, and the anchor is broken out by the momentum of the boat. During this whole operation the anchor crew on the foredeck is free of dodging headsail sheets and is unobstructed by the headsail. As the foredeck crew reports that the anchor is broken out, the mizzen is backed to throw the bow off on the proper tack.

At this point readers may wonder why I am recommending a yawl rather than a ketch. A properly rigged yawl will do anything a ketch can do, while there are a number of things that a ketch does that a yawl does better. On a ketch the mainmast often must be well forward, giving a small fore-triangle. In turn, the mainsail size is restricted by the presence of the larger mizzen. Thus both the foretriangle and the mainsail are smaller than on a yawl of similar size (Fig. 5). As a result, the ketch rig is neither as effective to windward when the extra headsail area is needed, nor broad off.

When the ketch is running wing and wing, the mizzen is doused because it is of little use, while the larger mizzen staysail tends merely to blanket the main, collapsing and filling and trying to wrap a half-hitch around the helmsman's neck.

Admittedly, with the wind on the quarter and with the bigger mizzen staysail set, a ketch may have more to offer than a yawl. However, on a ketch, the mizzen is often too large to be backed easily for tight maneuvering.

On most ketches the mizzen also takes up too much room and is in exactly the wrong place in the middle of the cockpit. On a boat with a midship cockpit the mizzen is aft of the cockpit and out of the way. However, on the normal layout with an aft cockpit the mizzen is where you don't want it. The helmsman is sitting behind it and gets crosseyed looking around it; when he stands up the boom has to be high enough so he won't dent his skull on the mizzen boom. Another inconvenience of the mizzen on a ketch is the rainwater that cascades upon the helmsman and crew in the cockpit.

In very small boats under 30 feet the yawl rig is of dubious advantage, although it should be remembered that the Falmouth Quay Punt, which is a superbly handy little vessel, has a mizzen stuck back on the tip of the stern. Similarly, in a boat over 50 feet the mainsail of a yawl becomes so big that it is hard to handle. Similarly, the mizzen on a 60-foot yawl is too large to be easily backed, and at this point it is probably worthwhile to consider the ketch rig.



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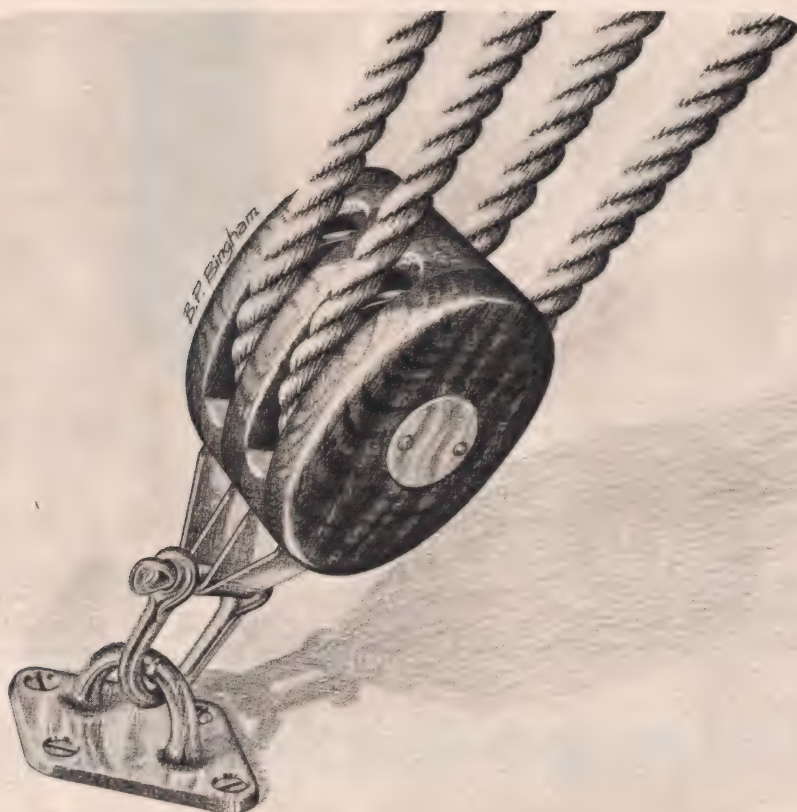
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THE GREATEST EXPENSE, IT TURNED OUT, WOULD BE THE PURCHASING OF BLOCKS; ALL SIXTY FOUR OF THEM (OF VARIOUS SIZES AND TYPES) HAD TO BE WOOD SHELLLED TO BE IN KEEPING WITH THE CHARACTER OF THE BOAT. UPON REVIEWING THE QUOTES FROM A HALF DOZEN SUPPLIERS, IT LOOKED LIKE A CASH LAYOUT OF \$1,500 TO \$2,200 WAS UN-AVOIDABLE... MONEY I DIDN'T HAVE!

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WITHIN 120 HOURS, EVERY BLOCK WAS FINISHED WITH STAINLESS STEEL STRAP, NYLON SHEAVES, ALL NECESSARY SHACKLES AND CRINGLES, STAINLESS AXLES, BRASS COVER PLATES AND FOUR COATS OF VARNISH. THE TOTAL COST WAS UNDER \$160 (INCLUDING A SILICON/CARBIDE SANDING DISC FOR SHAPING THE SHELLS, SPECIAL SAW BLADES AND DRILL BITS FOR WORKING STAINLESS, AND EPOXY GLUE FOR ASSEMBLING THE WOOD SHELL PARTS.

SO, THE AVERAGE COST OF EACH BLOCK RAN \$2.50 AND LESS THAN TWO HOURS OF MY TIME. IN MY OPINION, THIS ISN'T A BAD WAY TO INCREASE THE VALUE AND APPEARANCE OF AN OLDER BOAT WHILE INDULGING IN SOME VERY RELAXING AND ENJOYABLE THERAPY.

BE AWARE AT THE OUTSET THAT THE FEWER BLOCKS YOU MAKE, THE MORE EXPENSIVE EACH WILL BE. SUCH COSTS AS A "SHEARING SET-UP" CHARGE FOR CUTTING THE STAINLESS STRAP, THE MINIMUM MILLING FEE FOR LUMBER, THE PRICES FOR SPECIAL TOOLS WILL NOT REDUCE PROPORTIONATELY.

### TOOLS YOU'LL NEED

A SABER SAW, A HACK SAW WITH A SILICON/CARBIDE BLADE, A ROUTER FITTED WITH A CARBIDE "FLAT FOOT" BIT (THE SIZE OF BIT TO EQUAL THE BLOCK'S STRAP WIDTH), A CARBIDE  $\frac{5}{16}$ " "ROUND EDGE" ROUTER BIT, TUNGSTEN DRILL BITS FOR THE AXLE AND CRINGLE CLEVIS PIN HOLES, A VISE FOR HOLDING WORK AND BENDING STRAP, A MEDIUM-COARSE  $\frac{1}{4}$ " RAT TAIL FILE, A PAIR OF STRAIGHT-CUTTING TIN SNIPS, EITHER A TABLE SAW FITTED WITH A SILICON/CARBIDE SANDING DISC OR A BELT SANDER WITH A No. 60 CARBORUNDUM BELT, A DRILL PRESS (PREF.) OR HAND DRILL.

### SOME HINTS

TO AVOID ERRORS WHEN RE-PRODUCING THE PATTERN DRAWING ON THE OPPOSITE PAGE, HAVE IT "PHOTOSTATED" TO THE PERCENTAGE SHOWN ON THE TABLE.

THE SHEAVES ARE AVAILABLE FOR ALL LINE SIZES FROM SCORES OF HARDWARE MANUFACTURERS. THEY VARY IN TYPE FROM BRONZE WITH "OILITE" BUSHINGS (HEAVY) TO NYLON AND "DELRI" WITHOUT BUSHINGS. THE CHOICE IS YOURS.... BUT, DO NOT MILL YOUR SPACER LUMBER OR ORDER THE AXLE ROD UNTIL YOU HAVE THE SHEAVES IN HAND. THE SHEAVE THICKNESS AND AXLE DIAMETERS LISTED BY SUPPLIERS MAY NOT EXACTLY MATCH WHAT THEY SEND YOU. SO, TO AVOID UNDUE SLOP WITHIN THE BLOCK, MODIFY THE TABLED DIMENSIONS TO COMPLEMENT YOUR OWN SHEAVES BEFORE STARTING.

THE MOST ATTRACTIVE BLOCKS ARE THOSE WITH CONTRASTING CHEEK AND SPACER WOODS (e. MAHOGANY CHEEKS WITH BIRCH SPACERS; OAK CHEEKS WITH TEAK SPACERS; TEAK CHEEKS WITH MAPLE SPACERS).

THE GRAIN OF THE CHEEKS MUST RUN THE LENGTH OF THE BLOCK, BUT THE GRAIN OF THE SPACERS RUNS ACROSS.

ROUTE THE STRAP MORTICES INTO THE CHEEK LUMBER WITH THE "FLAT FOOT" BEFORE TRANSFERRING THE CHEEK (OR DOUBLE BLOCK CENTER) SHAPES. IT WILL HELP AVOID ALIGNMENT DIFFICULTIES.

THE MORTICES SHOULD BE A "HAIR" DEEPER THAN THE STRAP THICKNESS.

USE TISSUE AND CARBON PAPER FOR TRANSFERRING WOOD PARTS SHAPES AS WELL AS GLUING AND DRILLING POSITIONS. DON'T DRILL CHEEKS UNTIL ASSEMBLED.

GIVE THE INNER SIDES OF THE CHEEKS AT LEAST TWO COATS OF VARNISH BEFORE GLUING BLOCK PARTS TOGETHER. DO NOT APPLY VARNISH TO FAYING SURFACE, HOWEVER.

DON'T SAND BLOCK PERIMETER TO FINAL SHAPE UNTIL GLUING ALL WOOD PARTS.

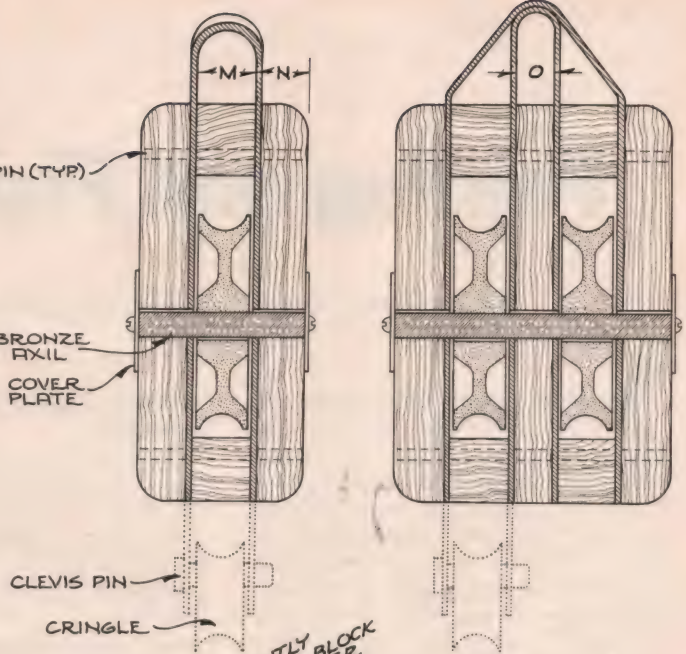
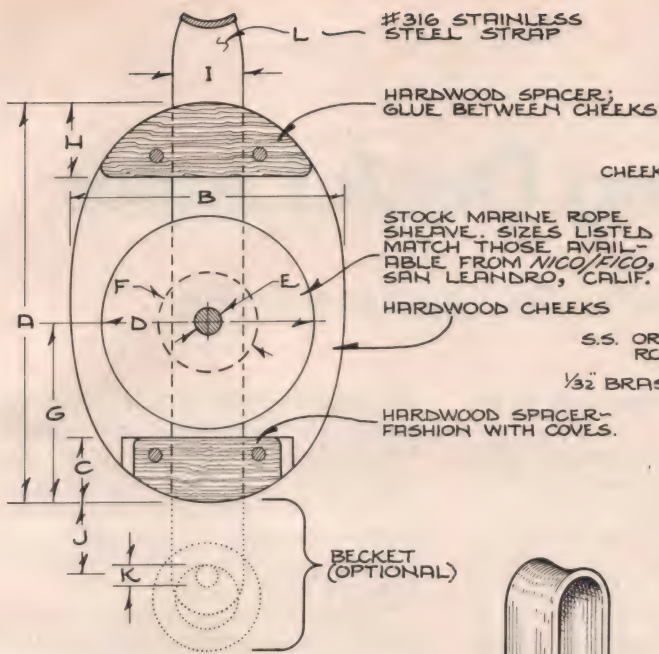
TO AVOID THE NECESSITY OF HAVING TO CLAMP THE BLOCK PARTS DURING GLUING (BOTH COSTLY AND DIFFICULT TO ACHIEVE PROPER ALIGNMENT), USE A 3-HOUR EPOXY. YOU WILL NOT HAVE TO BE TOO CONCERNED WITH TEMPERATURE AND YOUR BLOCKS WILL BE VERY STRONG. YOU MAY ALSO ELIMINATE THE CHEEK THRU-PINS.

WHEN GLUING UP, DON'T TRY TO ASSEMBLE THE ENTIRE BLOCK AT ONCE. FIRST, GLUE THE SPACERS TO ONE CHEEK ONLY. WHEN THIS GLUE HAS SET, APPLY THE OPPOSITE CHEEK.

"ROUND EDGE" THE CHEEK PERIMETERS ONLY AFTER SANDING TO FINAL SHAPE.

TO CUT THE BRASS COVER PLATE, BEGIN WITH A SMALL SQUARE, THEN PROGRESSIVELY SNIP OFF THE CORNERS UNTIL ONLY A SMOOTH, ROUND DISC REMAINS.



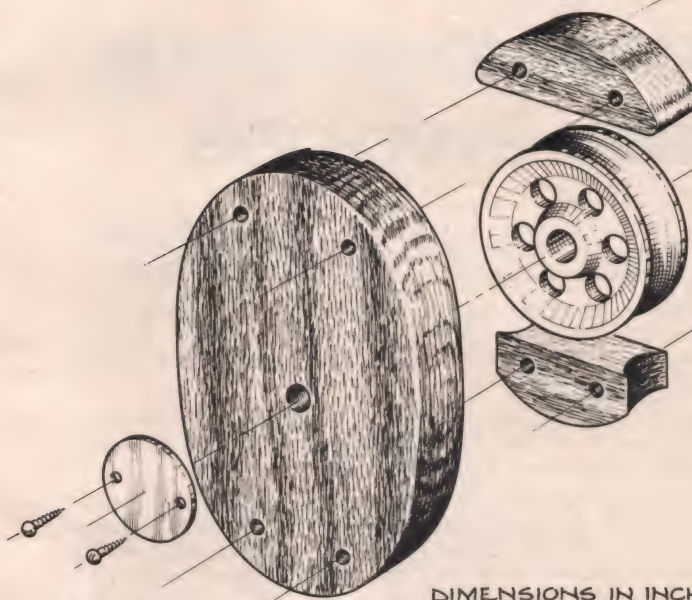


# PHOTOSTATIC ENLARGEMENT

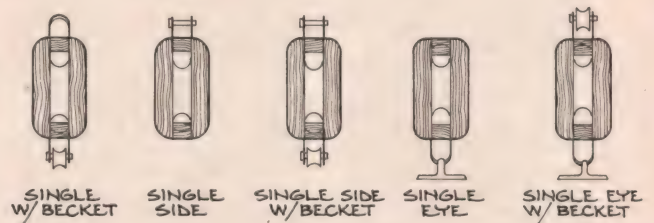
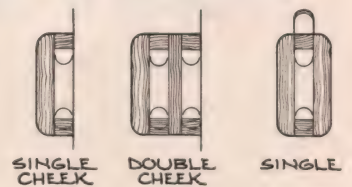
ROPE DIA.	INCREASE TO: %
1/4"	126 3/4
5/16"	150 1/2
3/8"	180 3/4
1/2"	201 3/4
5/8"	271

DON'T INSTALL STRAPS OR SHEAVE UNTIL CHEEKS HAVE RECEIVED THE FINAL COAT OF VARNISH

CUT CHEEK PINS SLIGHTLY LONGER THAN THE TOTAL BLOCK THICKNESS. FILE FLUSH AFTER INSERTION THROUGH CHEEKS. CHEEK PINS MAY BE ELIMINATED IF EPOXY GLUE IS USED.



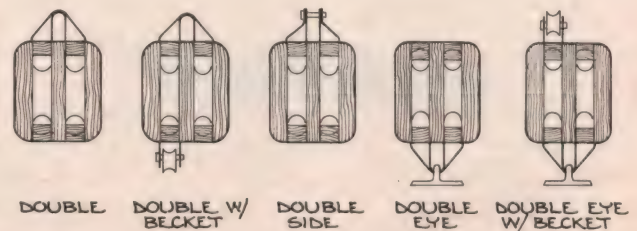
B.P. Bingham



DIMENSIONS IN INCHES

ROPE DIA.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1/4	2 5/8	1 3/4	1 7/16	1 5/16 x 3/8	1/4	7/8	1 1/4	7/16	1/2	7/16	1/8	1/16	7/16	5/16	1/4
5/16	3 1/8	2 1/8	9/16	1 1/2 x 3/8	5/16	15/16	1 7/16	5/8	9/16	1/2	1/8	1/16	7/16	3/8	5/16
3/8	3 3/4	2 1/2	5/8	2 x 3/16	5/16	1	1 11/16	11/16	5/8	5/8	3/16	3/32	5/8	7/16	3/8
1/2	4 3/16	2 7/8	11/16	2 1/4 x 3/16	5/16	1 1/8	1 7/8	3/4	3/4	3/4	1/4	3/32	5/8	9/16	1/2
5/8	5 5/8	4	13/16	3 x 5/8	3/8	1 3/8	2 1/2	1 1/8	7/8	7/8	1/4	1/8	11/16	11/16	5/8

DIMENSIONS "E" AND "L" AS WELL AS PIN LENGTHS MUST BE MODIFIED SLIGHTLY IF YOUR SHEAVES DO NOT MATCH THE LISTED SPECIFICATIONS EXACTLY. THE TABLE CORRESPONDS TO NICO/FICO.





# Finding and Fixing Deck Leaks

*Dick Cumiskey: Stopping leaks takes less time than worrying*

**T**he boat hasn't been built that won't have one or more leaks through the deck during its life. Any place where a screw, bolt, or window penetrates the deck is a potential leak source. Even steel vessels with all welded fittings develop leaks occasionally as the welds deteriorate, and despite the seemingly impervious structure of fiberglass construction, leaks under fittings occur.

Most of the leaks that I have encountered on boats are more of an annoyance to the boat owner than the amount of time and effort required to fix them should warrant. Leaks usually can be repaired in less time than may be spent worrying what to do. Yet the first impulse, a little squeeze of silicone sealant around the window or stanchion base, rarely solves the problem

and only serves to further frustrate the boat owner.

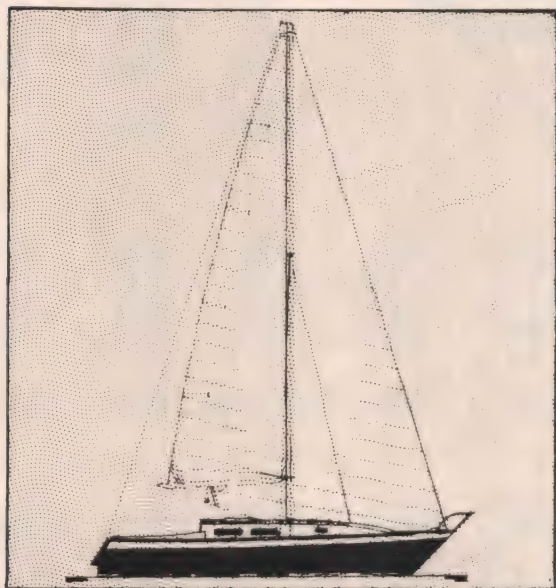
Failure to undertake proper repair and stop the leak often leads to serious damage. This damage is initially unseen. Most decks, even though of fiberglass construction, are reinforced with either a plywood or balsa core for stiffness. This reinforcement is in turn masked on the interior by either a fiberglass or soft headliner. The leak may allow water to get to the wood reinforcement, yet not allow passage directly to the interior and therefore offer no visible sign of trouble. Rot develops in the wood and a year or two may pass before the trouble becomes evident. Repairs at that time may be difficult, even virtually impossible depending on the construction of the boat.

The hardest part of the job is finding

just where the water is actually entering the deck or house. Boats with molded fiberglass headliners are often the most difficult boats to trace leaks in because the water gets between the deck and headliner and travels. It may become apparent in the interior far from its exterior source.

There is only one effective method of tracing a leak and it requires two persons. Start at the point where the water is first found in the boat's interior. If the water accumulates on a shelf, cabinet, or bunktop, analyze all of the spots from which it could have dripped to get there. Look for overhead bolts that may have a slight discoloration or rusty appearance to them. Good lighting is necessary because these indicators may be very faint. If the water is coming from behind a molded headliner, there

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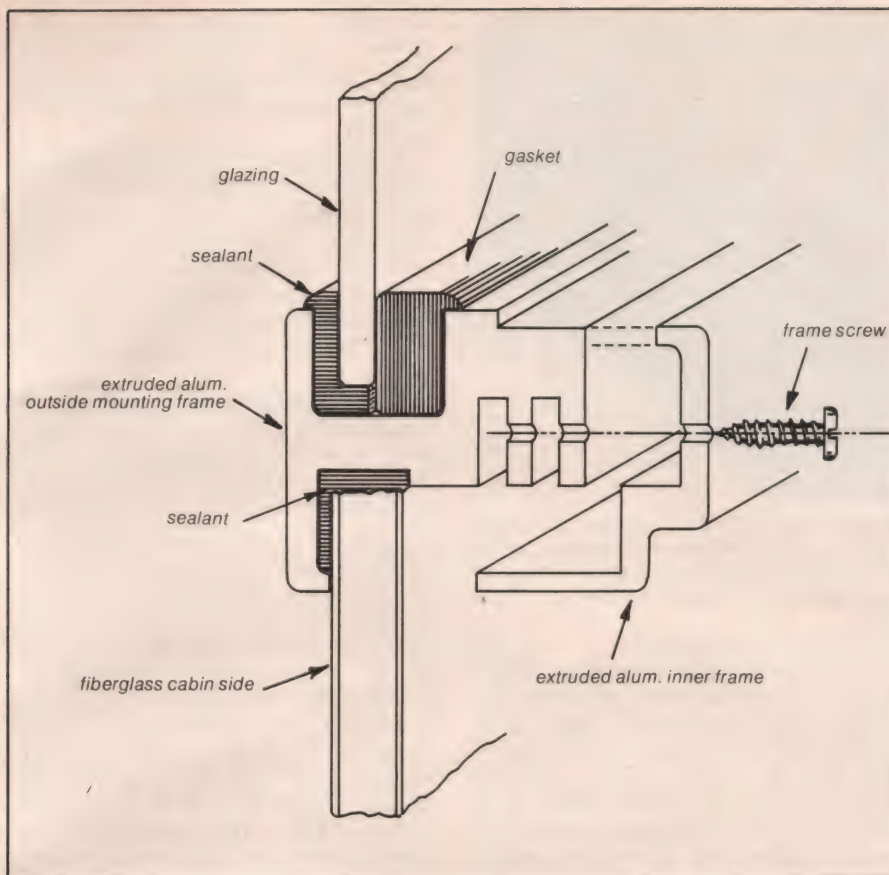


Figure 1: Representational drawing of an extruded aluminum window frame of the type commonly used in stock fiberglass boat construction

may or may not be any visible staining at the drip point. Put a piece of tape near anything suspect for future reference. When you are sure that you have examined every potential source, you are ready for step two.

The second step needs the help of a second person. Carefully identify the same fastenings on the outside of the boat that you have just marked off in the interior and bring a water hose aboard. Without using a nozzle, turn the water on to a very slow rate of flow. The water should just run, not gush or splash out.

Start on the portion of the deck that is absolutely the lowest in the area of the suspected leak. Lowest is determined by drainage. Hold the hose directly against the deck; allow no splashing or errant squirting. Often the lowest fitting is a lifeline stanchion base since they are mounted right in the waterway. Sailtracks, blocks, and winches tend to be farther inboard and thus higher. Let the water flow freely over the suspected parts for a minute or two while your partner watches carefully on the inside. If no water appears on the interior, move on to the next higher fitting in terms of drainage. Let your partner know when and to where you are moving so that the two of you are coordinated—the spot being checked on the inside is the same as the one that

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water is flowing over on the outside.

Remember, the object of the search is to find not only from where the water drips into the interior, but also its source on deck. If the boat does not have a molded fiberglass headliner, then the leak is likely to be a direct one; it may run down a surface before it drips, but the original site can be found. For boats with molded headliners, a leak from the outside through a handrail bolt on the cabin top may actually drip through a lighting fixture or stanchion backup pad remote from the source. Initially, these are harder to trace. If you use the method I have just described, however, you will find it. Just have patience.

Among the most frequent sources of leaks are fixed cabinhouse windows. There are two basic types of windows used in fiberglass boats. The two types are different both in their appearance and the original method of installation. The first type is the direct bolt-through kind. Two examples are opening ports and plain plexiglass. The fastenings securing these types pass directly through the frame and the side of the house. Just make sure that the leak from the opening port is actually from the installation and not just through the gasket on the opening portion. The water hose test will help you determine which part leaks; pinpointing a leak of



*Pulpit base bedded in sealant that has squeezed out uniformly as fastenings drew flange down tight. Excess sealant can be trimmed carefully after it has set*

this type is straightforward.

The second type of window is the fixed port with either an aluminum or plastic outside and inside frame. The typical fixed port has no fastenings visible from the exterior, just a smooth, extruded frame. This type of window is held in the boat by the clamping action of the fastenings from the inside frame's pulling the outside frame tight against the cabin sides. During installation, the outside portion of the

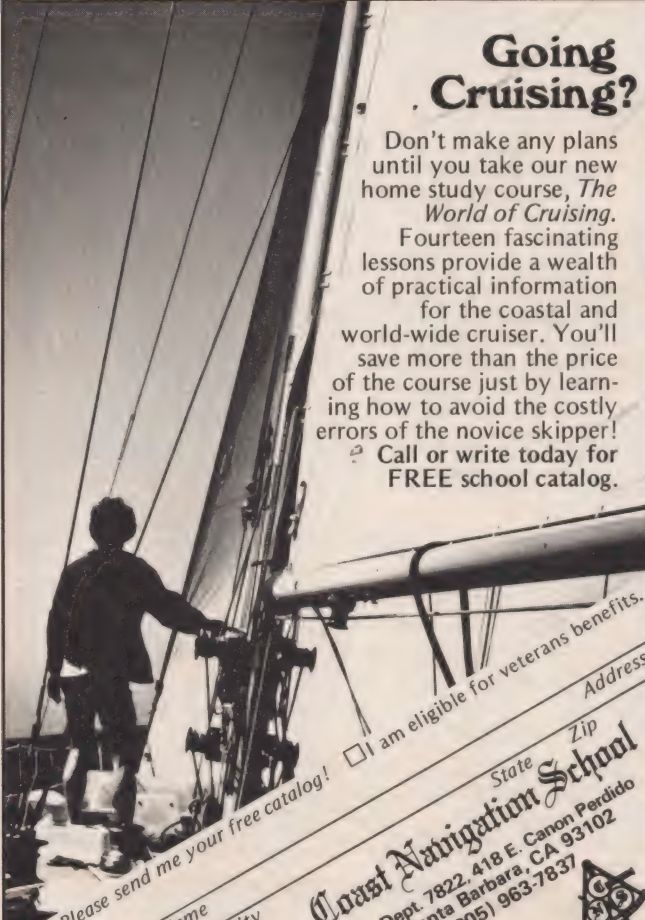
window is inserted through the cutout in the house, the inside frame is fitted over it, and the screws driven through the inside frame pull the outside frame inward.

There are two separate sources of leakage with this type of window. The most common is installation leakage. The water leaks between the house and the frame through defective sealant. The second type of leakage is internal in the window itself. The water leaks between the glazing and the frame.

It is easy to check the source. On the inside of the window, adjacent to glazing, is a plastic insert lying at 90 degrees to the glazing. It runs in a continuous band around the window. This can be carefully pryed out with a pocket knife or small screwdriver, then stripped clear with your finger. If there is water beneath this insert, then the leak is around the glazing. If the channel under this insert is dry, then the leak is in the installation.

An installation leak occurs because there is insufficient bedding compound around the bolt securing the piece of hardware or under the window frame. Water finds its way under the object, then passes alongside the threads or past the window into the boat's interior.

There are some limited circum-



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stances when you may be able merely to remove the one affected bolt, re-bed it, and the leak will be stopped. It is a chancy situation, however.

The correct way to reseal a leaky piece of hardware is to remove it completely from the deck. This will give you the opportunity to check several things. The first is to determine just which type of bedding compound was used on the original installation. There are three main classes. One is the linseed oil-base product that has been in use since the days of wooden boats. It should be identified since the remaining two sealants may not be compatible with any residue of this oily material.

The second and third sealants are silicone and modified polysulfide sealants. All three are excellent compounds when used according to directions but they are not effective used in combination.

All three compounds have the same basic problem when used on new fiberglass boats. The shiny, waxy surfaces of the moulded deck do not allow for a good adhesion of the sealant. This is sometimes the cause for the leak even though a year or more may have passed since the boat was built. As the part works with use or cooks in the sun, the adhesive boundary breaks down, allowing water to pass.

Another reason for completely removing the leaky item is to check for any water absorption or potential rot in the deck structure. If the wood reinforcement is wet, it can generally be dried out with heat. A lightbulb just beneath the hole will start warm, dry air currents moving upwards to help absorb the moisture. Just be careful not to place the bulb too close and cause a burn mark.

Rot, if it is present, will require other corrective measures and you should contact the builder or a boatyard experienced in fiberglass construction and repair. Above all, do not merely re-secure a fitting and ignore wet wood or core material under it.

When the fastening holes are dry, clean off the old sealant. Work the new sealant of your choice thoroughly around the fastenings including a final dab right under the head of the fastening and a thin coat on the base of the item being resealed. The most critical spot is where the bolt penetrates the deck. A moderate-sized squish from under the fitting is good insurance that the sealant is being forced where it needs to go.

Oil-based sealants can be cleaned up immediately, first by carefully scraping up the excess, then wiping the area clean with mineral spirits or paint thinner. Silicones and polysul-

fides are best left alone until they have cured. The excess can then be cut free with a knife. Just do it carefully so as not to pull the sealant from under the fitting.

The sealing powers of silicones and polysulfides can be vastly improved by using the priming agents that are sold by the trade name companies that market these products. Priming agents convert the product into an adhesive as well as a sealant. This treatment is especially recommended for repairing leaky windows. Many window leaks are caused by the window's "walking around" in the cutout and the adhesive properties help turn the sealant into flexible gaskets that move with the windows.

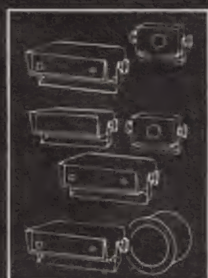
Should you be unable to find the primers in your area, the next best substitute is a careful sanding of the fiberglass under the fitting or window. Sanding helps remove any waxy residues as well as the previous sealant, both of which inhibit adhesion.

All fittings on a boat will eventually leak either from working or from exposure to the sun, so don't be too upset when they do occur. The real danger is in doing nothing about the leaks. Leaks will not go away by themselves. Nor will a little dab of silicone around the edges cure them.




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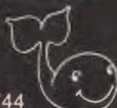
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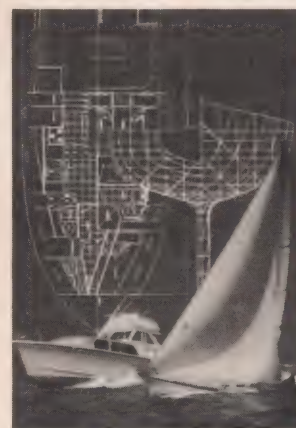
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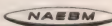


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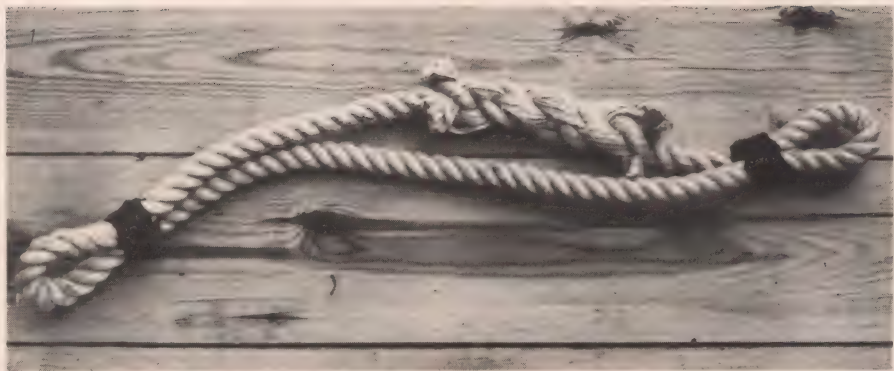


# Rope Fender

*Bill Beavis suggests a robust and traditional alternative to vinyl*

**N**o matter what the benefits are of the modern plastic fender, nothing looks as fine and robust as the old sausage-shape one made of rope. It is durable, inexpensive in that it utilizes old scraps of rope, and not the least difficult to make. All you need is a little bit of patience and plenty of time.

A rope fender is composed of three parts: the center core or bridge; the stuffing; and the outer cover. The bridge is merely a short piece of rope with its ends short-spliced to form a strap and an eye seized in each end.



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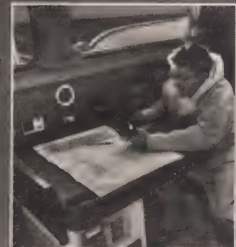
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The stuffing can be a variety of material. Originally, strips of old rope were favored, laid alongside the bridle, and served altogether with marline to achieve a cylindrical shape. Nowadays, foam rubber wound tightly round and secured with marline seems to be ideal. It provides the fender with a good spongy feel and, as long as it is covered with plastic, it will remain waterproof and buoyant. Cut and shape the foam either with a knife which has a serrated edge or with a hacksaw blade.

The best and most economical covering are the single strands of an old, worn-out 2½-inch hawser, although the covering on the fender in Photo 4



was in fact a complete, small size three-strand rope. Either way it takes about 150 feet of rope to cover a two-foot-long fender so whether this rope comes in one complete length or is

made up from the three strands of a larger rope will depend upon what is available.

The covering is put on with *needle hitching* which is simply just a series of half-hitches (Photo 3). Start by taking a



turn around the center of the fender and secure the line to itself with a half-hitch. Put on a row of loose half-hitches all the way around and when you come to make the second row these will be put on the loops of the first row. Continue in this fashion all the way down the fender. It is simple but heavy work and you will certainly need the help of a marlinespike or large screwdriver to enlarge the holes of the loops. Should you need to make a joint now, then this is done by seizing a new strand at a position about six inches from the end of the old one and fixing it so that the next half-hitch comes right



on top of the joint. Tuck the ends under the covering where they will be held secure (Photo 4).

As the work approaches the taper you will need to omit the occasional half-hitch to allow for the reduction. Indeed, by the time you get to the eye, the number of half-hitches will be down to three or four. These last few hitches, incidentally, should be taken around the bridle so that the covering is properly secured. The recommended way to finish off is with a standing turk's head but it may be sufficient to forget about this and simply drive the end of the rope down the center of the fender as far as it will go. The foam rubber will successfully grip it.

Once you have completed one end of the fender you must start again at the center forming another round of half-hitches around the original strand.



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2nd: Terry Dahl (nacra 5.2)  
3rd: Fred Roland (nacra 18²)  
4th: Tom Roland (nacra 5.2)  
5th: Chip Wayland (Sol Cat 18)

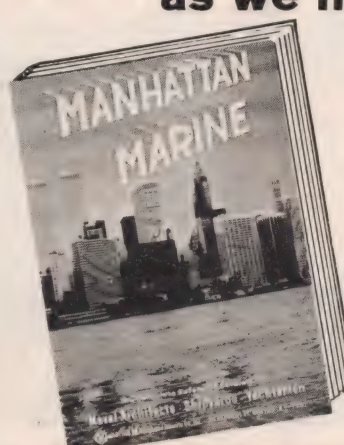


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# OSTAR: the Vital Choice

north or south—two different races  
for singlehanders

By David Palmer

As finishers in the Observer Single-handed Transatlantic Race stream into Newport, Rhode Island, in late June and early July perhaps the most frequently asked question will be: "What route did you take?"

For the record 142 entries in this fifth running of the solo sailing marathon, the choice of route was by far the most important decision they made. As the crow flies, and assuming this particular crow knows all about great circles, the distance from Plymouth, England, to Newport is about 2,850 nautical miles. That is the so-called northern or Great Circle route, the one which to date has always been favored by the winner of the OSTAR.

However it's a sure bet that a number of the multihulls, especially the smaller ones, took the southern, or Azores route. That's the course I planned for

my 35-foot trimaran *FT* before setting out from Plymouth. If the crow were to take a series of great circle hops, first to the Azores, then along the 38th parallel until it hit the Gulf Stream, and then another small jink north towards the Nantucket light and Newport, it would have flown a little over 3,300 miles. In other words, anyone going south is facing, on paper, an extra 450 miles, or one sixth of the northern route.

Yacht races, however, are not sailed on paper. Ever since I first started thinking about the OSTAR four years ago, I have been attracted by the southern route. It was pioneered in the 1968 race by an American, Tom Follett, in the revolutionary proa *Cheers*. *Cheers* was in the lead two days from the finish, when she ran into a flat calm and finished third. In 1972,

six of the first 10 finishers went south, including the winner of the small class, Alain Gliksmann in *Toucan*.

Within a day of the start, boats are more or less committed to one route or the other. After a week or 10 days, the Gulf Stream will be dividing the fleet into two halves, with the most northerly and the most southerly competitors up to 750 miles apart in a north-south direction. Since the Gulf Stream can in places run at up to three knots more or less dead against the direction of the race, and is itself between 200 and 300 miles wide, it provides a silent and invisible barrier between the two halves of the fleet, until they join up again south of the Nantucket shoals.

The race, therefore, quickly turns into two races, between two fleets enjoying different weather systems, or rather, different ends of the same one. In very broad terms, the northern route should favor strong, heavy, traditional windward machines, and the bigger and heavier the better. The southern route is for boats which prosper most in light airs, and which can take maximum advantage of the wind when it frees; in other words, most of the multihulls, and any monohulls which find the prospect of the northern route too daunting.

Perhaps at this stage, I should add one or two refinements to this broad



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outline. The northern route is for masochists, who enjoy being freezing cold, North Atlantic gales on their nose, reefing, thick fog, dodging in and out of icebergs, running into trawler fleets and sailing for 600 miles along one of the world's most inhospitable lee shores.

The southern route is for hedonists who enjoy sailing in their bathing or birthday suits, warm starlit nights, sailing through the Azores and the sight of basking whales.

I fit into neither of these categories. My boat, however, is a hedonist. There is nothing *FT* loves more than a breeze between 10 and 15 knots forward of the beam. In wind of from 15 to 25 knots, she is still perfectly happy. Off the wind, she flies, with her spinnaker pulling her at up to 16 knots.

But in heavy seas, and in winds over 30 knots, *FT* begins to complain. She is too light to pound into heavy weather. Instead, she prefers, in the most sedate and comfortable way possible, to ride out Force 7½-10 gales lying ahull, with an absolute minimum of fuss. She is the epitome of a boat that on this race takes the southern route. Here is why:

**1. Winds:** On the first leg of the northern route, from Lands End to Cape Race, roughly half the winds can be expected to be somewhere between



David Palmer's Kelsall-designed and built trimaran *FT*, one of the early favorites in the OSTAR Jester Class. Palmer planned to take the southern route

northwest and southwest; and half of those can be expected to be Force 5 and above. For the final third of the course, from Cape Race to Newport, roughly 55 percent of the wind is normally between west and south, and about a third of those headwinds are Force 5 and over.

The major danger on the southern route is calms. Roughly half the time,

the wind is normally between Force 1 and 3. Really heavy weather is rare, although in 1968, a hurricane came screaming through the southern route boats. On the first leg, from Plymouth to the Azores, the prevailing wind direction is somewhere between west and north but there is also a fair proportion (about 17 percent) of southwest. After the Azores, the pre-

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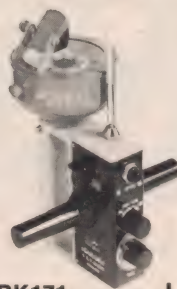
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vailing wind is between south and southwest (roughly 35-40 percent). The danger here is westerlies (25 percent).

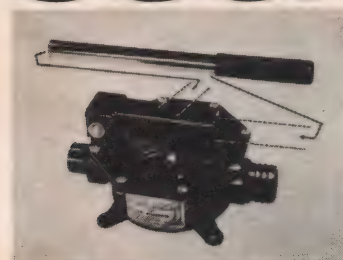
On either route, the OSTAR is es-

entially a windward race. But the incidence of real nose-bashing headwinds is far higher on the northern route.

Essentially, the southern route boats

are sailing round the Azores high; their main danger is that they get caught in the middle of it. The northern boats are sailing straight into the succession of lows that bounce along the top of the

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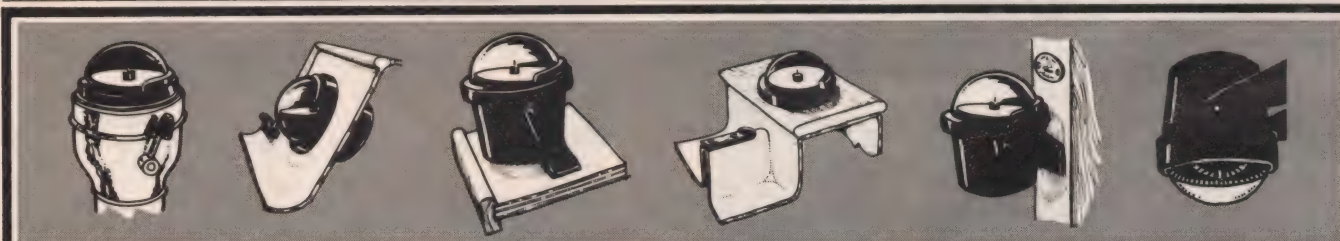
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Azores high. Their main danger is that they will be stopped dead, or, as in 1968, driven many miles backwards, by a really fierce secondary low.

**2. Currents:** Boats on the northern route will have about half a knot of current dead against them all the way. In theory, they should be able to pick up the south-going Labrador current for the last 900 miles. In practice, not many of them find it. Part of the reason is that the Great Circle route is a myth. Nobody ever stays anywhere near it, because headwinds slowly drive them south towards the northern limit of the Gulf Stream. It is entirely in keeping with the thorough unpleasantness of the northern route that the way to tell when you have entered the Gulf Stream is when the water gets warm—and as soon as it does that, you must head north into the cold again.

On the southern route, there is an easterly set to the current of half a knot between Plymouth and the Azores. Thereafter, the trick is to stay just south of the Gulf Stream, and to hope that you pick up the occasional west-going eddy from it. I suspect that that hope is even more vain than looking for the Labrador current. At some point, the southern route boats have to peel north towards Newport and cross the Gulf Stream. This means about 350 miles

crossing a foul current of up to two knots in weather which is liable to sudden emotional spasms (thunderstorms, squalls and the like) induced by the Gulf Stream.

All in all, the currents marginally favor the southern route boats. There could be a "saving" of 100 miles on this count, although I would not want to have to prove it.

**3. Distance:** According to Frank Page, the London *Observer's* admirable yachting correspondent, *Cheers* actually sailed fewer miles through the water in the 1968 race than *Sir Thomas Lipton* and *Voortrekker*, which came first and second after both took the northern route. So it can happen, especially if, as in 1968, the northern route boats sail straight into hurricane force headwinds. But no southern route boat should count on it. I anticipate that I will sail at least an extra 200 miles through the water by going south.

**4. Other Joys:** The mean air temperature on the northern route in June is 55 degrees. On the Grand Banks, it's nearer 45 degrees. The mean water temperature does not bear thinking about. On the southern route, the mean air temperature is 65 degrees.

Roughly 600 miles of the northern route is within the "mean maximum

iceberg limit." The whole of the southern route is outside it.

For the same 600 miles on the northern route, there is a 20-30 percent chance of thick fog, with a visibility of less than half a mile. This area is also famous for its fish, so that a northern route skipper experiencing his pleasures to the full would be beating into strong headwinds, surrounded by icebergs in temperatures of about 40 degrees as he dipped in and out of the Russian trawler fleet with visibility down to a few hundred yards. On the southern route, there is a one percent chance of half-mile fog until near the end of the race, when fog and fishermen must enter the reckoning.

For my own part, I am extremely inefficient when I am cold, and liable to do silly things and make major strategic or navigational errors when I am very tired or very frightened. The northern route seems to me to be designed to produce these errors; the southern to produce a more alert helmsman, enjoying his sail at least some of the time. I shall be going south, taking with me the risks of that route. My main danger is that one of the monohulls who stays north will avoid the nasty weather, and/or that I run into the Azores high and get stuck in it.





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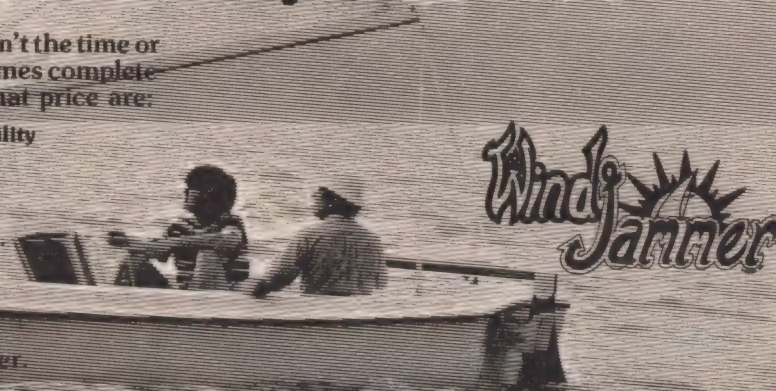
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# The English Coble

by Francis Poole

When I look back over the years, at the various types of open sailing boats I've seen in many parts of the world, I've yet to find one with more graceful lines or better seagoing qualities than the English coble.

Originating in the Whitby area of the NE coast of England, the home of that famous navigator, Captain Cook, the coble was used by the inshore fishermen over a large area of that coast, facing the North Sea, during the end of the last and the beginning of the present century.

About 30 feet long with a beam of five feet, the coble has a fine entrance and a flat stern at a 40-degree angle to the water.

Heavy to row, the boat carried four oars built in two parts. The stock fitted on the blade at right angles and had a metal eye bolted on it to fit over the wooden thole pins, permanently fitted in the gunwales, for rowing.

The single mast, set with quite a rake, sat in a tabernacle with the heel resting on the top of the keel and kept taut by wedges.

The single lug was always hoist on the port side of the mast. As only a small portion of the sail was forward of the mast, it didn't have to be lowered and dipped when going about. Although the coble had a bowsprit and carried a jib, it was rarely used.

The tack on the starboard side led

through a hole in the sheer strake to a small tackle and belayed round a pin through a midship thwart. To go about it was slacked off and a handy billy, secured to a thwart directly opposite the tack, was hooked onto the lower cringle in line with the first line of reef points. It was also belayed round a pin through a midship thwart after being hauled taut.

The sail was "barked," i.e., boiled in a dye of bark chips. This colored the sail a rich, dark reddish brown and negated the effect of salt air and water on the sail.

With a bottom similar to a ship's lifeboat, the two side keels, being a little deeper than the main keel, enabled the



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coble to sit upright on the sand when the tide was out.

When the boat was sitting on the sand the bow stood nearly six feet high and the stern three feet. Ballast consisted of several 100-pound bags of sand.

Our local pilots (Hartlepool, some 30 miles north of Whitby) eventually became interested in the coble, but wanted a boat which could be towed stern first. As the bow was too fine for towing head first and the square stern not at all satisfactory, the pilots took the matter to my grandfather, who owned the local boat-building establishment, and asked him to design a modification to the stern to make it suitable for towing. This he did and built a prototype with a sharp stern as in the photo. On trials it proved very satisfactory. From then on, only that type of boat was built for both the pilots and the fishermen.

It was not uncommon, when they were cruising in the North Sea on the lookout for ships, for the pilots to spend two or three days in those completely open boats. The crew of two pilots and an apprentice pilot had to sleep as best they could on the thwarts.

There being no such thing as radio to warn the pilots of the time of a ship's arrival, many were the exciting races I saw as a small boy when a ship showed



Original Whitby coble showing the square stern

up unexpectedly.

Once a pilot had embarked, the other pilot and the apprentice could go out to look for another ship. If not, then that pilot would go on board as a pas-

senger, leaving the apprentice in the boat as it was towed stern first, at anything up to 10 knots, from possibly two or three miles from the port. With its low, sharp stern and high bow and with

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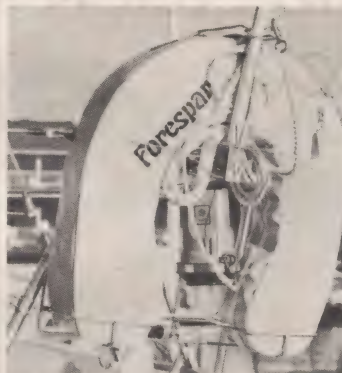
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Hartlepool pilot cutter showing the sharp stern. Author as a boy is in center with the pilot

a drogue towing astern to stop it from riding onto the ship's propeller, the coble towed exceptionally well.

The sheer strake had a large tumble-home and this allowed the boat to lie over at quite an angle without shipping any water. To see a boat reefed down (four lines of reef points) in a strong

breeze and rough sea was thrilling sailing and also dangerous for an open boat. Only once did I see a boat capsize in a strong breeze. The sheet jammed when the boat was hit by a squall. One man drowned; the others hung on to the overturned boat.

In the late 1920s when a pilot cutter

took over the duties of embarking and disembarking the pilots, the coble was phased out. Now it is only used by inshore fishermen—but with one difference: the coble has an engine.



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# The Dovekie

by Edith Blake

Up in the frozen world of northern Greenland and Iceland an awful lot depends on a small bird only eight to nine inches long, since it and its guano do much to support life in the Arctic. This tiny character, which strongly resembles a croquet ball, is properly called a dovekie, although it is known in some places by a lot of other names, such as the little auk, rotche, alle, pineknot, sea dove and ice-bird, the latter because the bird is holarctic in distribution, nesting in the north Atlantic and Arctic oceans, Baffin Island, north Greenland, northern Iceland, Spitzbergen and Franz Josef Island.

In winter the dovekie inhabits warmer

climes down both sides of the Atlantic, sometimes as far south as the Mediterranean and Cuba. The bird is highly migratory and often invades strange places with suicide flights which are similar to the mass migrations of the lemmings, possibly because of fluctuations of plankton on which the dovekie feeds.

Even when in the air, it manages to look round, and although the bird flies well it's a miracle because dovekies are not that aerodynamically well designed. Its small head and neck are similar in construction to those of the quail; its top is black and its undersides are white, while the bird has brown

eyes; and the rest of it is round, round, round! Its large, black webbed feet (which look like swim flippers) are placed well aft, making the dovekie look as if it were walking on its hind legs.

The dovekie's element is the sea or the ocean air. The bird never comes ashore except to lay a single egg and raise a single chick, or when it is cast upon the land more dead than alive by some storm it can't handle. On the sea it has an adjustable waterline so it is able to float high and still look like a croquet ball, or low like a loon. Under water the dovekie paddles with its feet (which also work like swim flippers)

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and flies with its wings. The bird's underwater fishing expeditions last about 33 seconds, but when frightened it can stay under for more than a minute.

The main diet of the dovekie is plankton, shrimp, black anthropods (which give its dung a lavender cast), crabs, marine insects and crustaceans.

In the air dovekies seem to fly like bullets but they have trouble outdistancing predators such as the gyrfalcon and that ever-encroaching, ever-hovering burgomaster gull.

On land, all looks lost from the moment dovekies take their first step (their design is bad for this too). They are ungainly with their legs too far aft to support their fronts, and have trouble getting up enough speed to take off. In fact during the November storms which occur at the height of their migrations, many of the little birds are cast up on land bewildered and unable to get airborne and back to sea. This is when man can be of help by placing the feathered croquet ball in some harbor, pond, lake or by taking it to a high, windy building or cliff so that it can take off.

The dovekie is a member of the alcid family, consisting of a bunch of 23 birds which include the extinct great auk, the auklet, murre, murrelet, guillemot and that parrot-like concoc-



Edith Blake

tion, the puffin. The great auk itself was once called a penguin and no one knows how its name was transferred down to that dinner-jacketed, flightless bird we know as the landlord of the Antarctic.

Although there is a visual resemblance between the penguin and alcids, the penguin is much lower on the evolutionary scale and so dim-witted it prefers surviving those long dark winters in the Antarctic to migrating,

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whereas the little dovekie is more closely related to gulls and terns and hence has the sense to get out of the dark in winter.

Small as it is, the dovekie is a preserver of life in the Arctic. It comes in such swarms and is so gregarious that the air has been known to darken when a flock takes off. Its guano has fertilized the habitat so that grass (or something similar) grows and this supports the Arctic hare, the ptarmigan, caribou and foxes which in turn eat the dovekies. Therefore, the dovekiewise panics at the sight of a fox and also at the sight of the burgomaster gull which hovers over the dovekie as it dives and then grabs it when it must surface for breath.

Like the penguin, the dovekie is overly curious when it comes to man, but it would be smarter to panic at the sight of him as well as the fox. Therefore, if an Eskimo wishes dovekie for his larder (which he does) he need only sit still near the nesting ground and wait for the birds to come to him. While they watch him, he casts his dip net catching about 10 birds a throw, repeatedly, without spooking the flock.

Dovekie is the main part of the Eskimo summer diet and to the Eskimo (surely no one else) it is best eaten warm right from the skin, which will later be made into a shirt. Both dovekie

and dovekie eggs also store well in that cold climate, which is no help to the birds.

Swarms of dovekies arrive en masse at their breeding grounds in spring and waste not a second building a nest, but lay their eggs in crevices, crannies and burrows in rocks on the talus slopes and ice floes. The usual clutch consists of a single pale blue egg which is large for the size of the bird. If by some mistake there are two eggs, these will be smaller since this small round bird has all he can handle incubating that one large egg.

The first eggs are laid in the last week of June, but the majority are not laid until the first week of July and onward until almost the end of July, so that hatching does not begin until the middle of July and lasts almost until the end of August. Both parents incubate (although not at the same time) and it takes the two of them working full time to feed the resulting chick which, like the heron, arrives ravenous and stays that way (it has a lot of growing and feathering to do in a short time).

Fortunately, with 24 hours of daylight the alternating parents can fish around the clock to feed that one chick, going on long fishing expeditions along with their neighbors, so when the convinced-he's-starving chick hears a great rush of wings, it

starts a pleading chirp. Using their crops as pockets the parents regurgitate food in great quantities while making soothing cooing noises reassuring the chick that it's not going to starve.

The chicks come in sooty gray fuzz which quickly gives way to their juvenal plumage before they leave their nests. The new feathers are similar to that of their parents but browner, until their first prenuptial molt in late winter when they gain the clear black glossy plumage of the adults.

Ready or not, there comes that awful moment in fall when the birds decide to migrate, taking off in huge batches. It then becomes a matter of fly or die for the uninitiated chicks who take to the air for the first time in a wobbly, slow and visibly scared-to-death manner. Some fall behind, some drop out and some return to the rookery.

Like so many other birds, the poor little dovekie is diminishing. What with the Eskimos, the ravenous ravens, gyrfalcons, foxes, the burgomaster gulls, the chicks that don't learn to fly in time, storms, and just plain accidents, it doesn't need the inventions and interventions of man to add to its problems. The greatest auk has already become extinct. It would be a shame to lose the smallest.



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Length	15'7"
Water line	14'0"
Beam	5'0"
Mast height	22'0"
Sail area	90 sq. ft.
Hull weight	165 lbs
Crew capacity	2-3
Flotability	500 lbs

For more information write No. 471 on Reader Service Form.



# Just Launched

Edited by Jeff Spranger



## Southern Cross

Southern Cross is a Thomas Gilmer design in the Colin Archer tradition available in several stages of completion from bare hull to finished vessel.

The hull is fiberglass with an 1/2-inch Airex PVC foam core molded in one piece. The deck is balsa-cored. Ballast is 4,180 pounds of cast lead bonded within the hull and fiberglassed over. A 20-horsepower Westerbeke Pilot 20 is standard auxiliary power with 37 gallons of fuel capacity.

Below decks, the joinerwork is varnished mahogany with a teak cabin sole. There are berths for five in a traditional cabin layout with a pair of vee berths forward, two settee berths with table between in the main cabin

and a quarter berth to starboard. Headroom below is 6'2".

The galley features a gimbaled two-burner Shipmate stove with oven, stainless-steel sink, Formica counter tops, icebox, and food and utensil storage.

On deck the trim is teak including handrails, caprails, and weatherboards. Deck hardware is of bronze with stainless-steel pulpits fore and aft. Spars are of aluminum with stainless-steel rigging and attachments.

Options include custom ground tackle weldment on the bowsprit, a variety of alternative engines, cabin heater, Thurston sails and dodger, and jib club fittings.



## S2 9.2

The new 9.2 from S2 Yachts of Holland, Michigan, is a 30-foot cruising sloop designed by Arthur Edmunds and the S2 Design Group. The deck layout features two options: a conventional configuration with a trunk cabin and aft cockpit; and an aft cabin, midship cockpit version. Shoal draft keel as well as the full draft keel are also available.

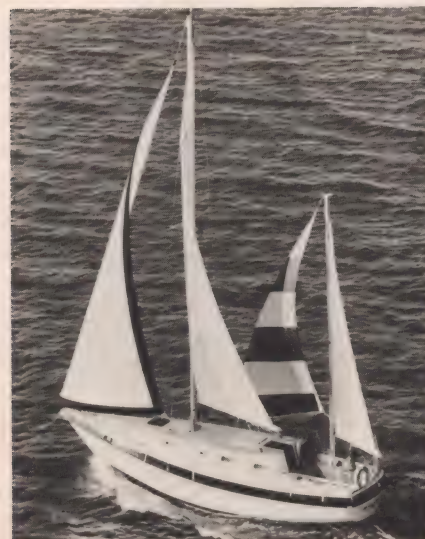
The aft cockpit model sleeps four with two in the main cabin and a vee berth in the forward cabin with a fifth berth optional. The aft cabin arrangement includes a double berth aft, an extended vee berth forward

with a table between that lowers to form a double berth, and a quarter berth to port aft opposite a midship head.

Both layouts have a galley with icebox, sink, and flush-mounted two-burner stove.

Auxiliary power is a 30-horsepower Atomic 4; and standard equipment for both models includes carpeting, pulpits and lifelines, mainsail and jib, shower in head, teak joinery and trim, and aluminum toe track.

Options include diesel power, pedestal steering in the aft cockpit version (standard in the center cockpit), refrigeration, and additional sails.



## Out Island 37

Morgan Yacht's new Out Island 37 cruising auxiliary features a layout which represents a departure from the conventional designs of this size. The engine room, tankage and related mechanical systems have been built into the wide full cruising keel. Not only does this provide greater accessibility, it also makes the space under the aft cockpit where the engine room is usually located available for additional living space. Thus, below, the Out Island 37 has a step-down dinette and conversation center as well as private sleeping accommodations for two on a convertible double.

The main saloon also has an entertainment console running fore and aft along the centerline. It houses a large refrigerator, wet bar with pressure water, beverage locker, built-in color TV and an AM/FM 8-Track stereo with four speakers.

Forward is a private stateroom which sleeps two. A two-entrance head and walk-in stall shower serves both staterooms. Sleeping accommodations provide for seven adults on three doubles and one single. Among added features are an all stainless-steel galley, a navigator's station and diesel power. A ketch rig is optional.



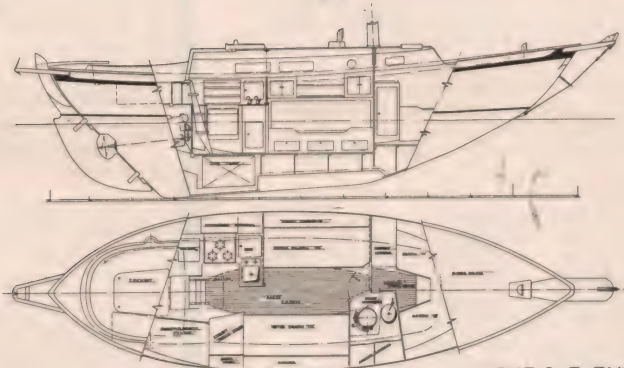


LOA  
LWL  
Beam  
Draft

31'  
25'  
9'6"  
4'7"

Displacement  
Sail area  
Price

13,600 lbs  
447 sq ft  
\$33,900



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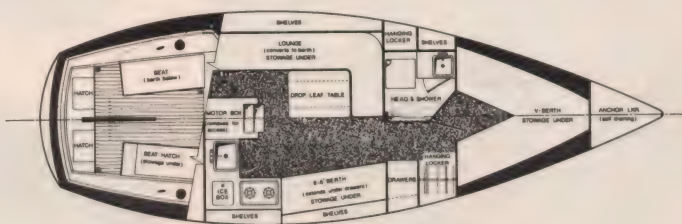


LOA  
LWL  
Beam  
Draft

29'11"  
26'25"  
10'3"  
4'11" Deep keel  
3'11" Shoal keel

Displacement  
Ballast  
Sail area  
Price

9,800 lbs  
4,000 lbs  
468 sq ft  
\$24,975



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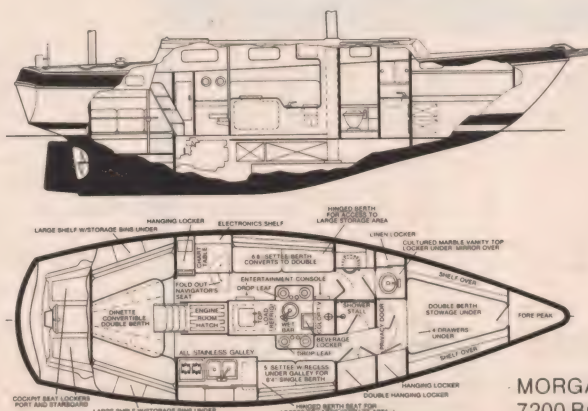


LOA  
LWL  
Beam  
Draft

37'8"  
28'3"  
11'  
4'

Displacement  
Ballast  
Sail area (sloop)  
Price

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7,500 lbs  
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# Gear & Equipment

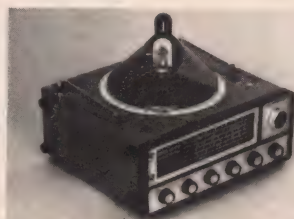
Edited by Gail E. Anderson

## Burglar Alarm

The Shore Patrol burglar alarm kit consists of an electronic control head with 108-decibel horn, three sealed magnetic sensors, 60 feet of wire, master lock, keys, and warning decal. Unauthorized entry through an opening protected by the sensors produces a loud pulsing horn blast for one minute. Ship's lights and horn may also be pulsed by the alarm system.

Operating from 12-VDC ship's power, the solid-state control head is protected by an ABS outer housing measuring 8 x 5 x 6.5 inches. The system is controlled by the master key. Attempts to tamper with or cut the wiring will activate the horn. \$180 for basic kit; extra sensors \$5 each

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The Aqua Guide 70400 is a portable four-band radio direction finder that also functions as a receiver for AM (beacon band, standard broadcast band, and marine band), VHF-FM, SSB, and Consolan monitoring. Able to operate from nine D-size flashlight batteries or from ship's power, the unit has a "sense" antenna to help eliminate 180-degree ambiguities. There are separate controls for RF and audio gain, and two optional crystals can provide instant tuning on the marine band.

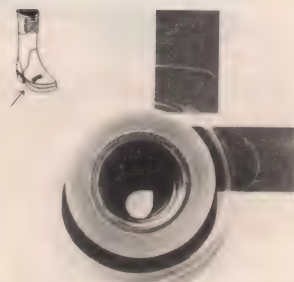
Measuring 11 x 12 x 5 inches, the radio direction finder weighs eight pounds. \$295.

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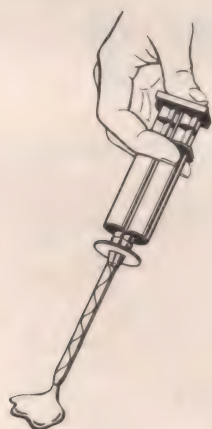


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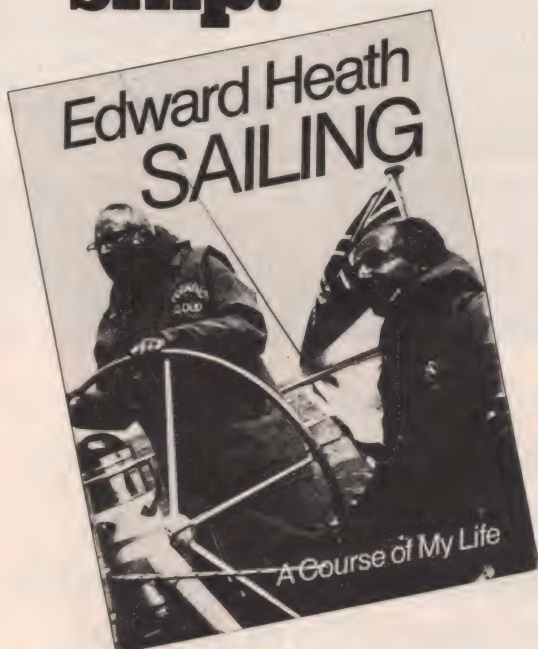
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# Ahead and Astern...

## Trimaran Gulf Streamer Capsizes; Mishap Prevents Phil Weld from Competing in OSTAR

Phil Weld, expected to be one of the strongest contenders in this year's Observer Singlehanded Transatlantic Race, and his crewman Bill Stephens, were rescued from Weld's capsized trimaran *Gulf Streamer* five days after it was overturned by a rogue wave following a North Atlantic storm. Both Weld, 61, of Gloucester, Massachusetts, and Stephens, 21, of Birmingham, Michigan, were unhurt in the April 27 accident.

At the time the two were sailing the 60-foot Dick Newick-designed trimaran from Florida to England for the start of the solo marathon. The previous day *Gulf Streamer* had sailed through storm conditions without incident, pushed only by a small staysail. The following morning, said Weld, conditions had improved. A morning sight showed them to be in the Gulf Stream, 350 miles south of Halifax and 300 miles north of Bermuda.

Weld, who was below, didn't really see the wave that ended his plans to compete in the singlehanded race, but Stephens, who was at the helm, described it as a 40-foot monster with a foaming double crest that came at the boat at a different angle from the other seas. Weld says Stephens' efforts to keep the big trimaran from broaching were in vain.

"We went up on our side. I kept think-

ing she'd come back," Weld said. "And then the second crest hit us, and we went gently over."

Weld found himself standing on the cabin overhead up to his waist in water while Stephens got out of his safety harness and ducked down through the flooded companionway to join him. For the next three hours they worked with a drill and hacksaw to cut a 12 x 18-inch escape hatch through the bottom of the hull.

They had already activated an automatic emergency position indicating radio beacon (EPIRB) and now proceeded to locate and salvage two other types, also onboard, together with sextants, clothing, a bottle of bourbon and a few cans of beer. All three emergency radios proved useless in hastening their rescue.

After spending the first night huddled in the forepeak of the trimaran, the pair rigged a hammock made from a spare staysail above the water in the main cabin. Then they started sawing another hole through the hull into the after cabin where they knew they would find food and supplies, a job which was halted by darkness. As they started the third day upside down, Weld and Stephens finally broke into the after cabin and recovered

food, life jackets, and other supplies. Lunch that day was cold corn and chicken stew.

The afternoon of the following day they sighted a freighter but failed to attract its attention even though they fired five flares and used broken mirrors for signaling. To increase their chances of rescue the pair attached pieces of broken glass to the outside of the hull, scratched an SOS in the bottom paint, and placed a flag and a radar reflector rigged on poles jammed into the daggerboard slots.

Finally, some 32 hours later at 11:30 PM on May 1 Stephens sighted the container ship *Federal Bermuda* which was already coming to their rescue before *Gulf Streamer* fired their first rocket. The freighter, a new ship making only her third run between Bermuda and Halifax, worked alongside the trimaran, and Weld and Stephens climbed a cargo net lowered over the side.

A subsequent two-day air search by Weld to find *Gulf Streamer* proved fruitless, but a subsequent sighting 180 miles north of Bermuda suggests that the boat was carried south by a reverse meander of the Gulf Stream. At press time Weld was planning to salvage his boat if her position could be pinpointed.

## Nine Injured as Wave Overturns Sorcery in North Pacific; Damaged Boat Towed to Alaska

Only two of 11 crewmembers aboard the C&C 61 *Sorcery* escaped injury when the big sloop rolled through 360 degrees after being overtaken by a particularly large sea in a Northern Pacific storm. She lost both her mast and rudder. The accident occurred May 8, 1,200 miles north of Hawaii as *Sorcery* was running under storm trysail in winds up to 50 knots and in 20-25-foot seas.

The sloop, owned by Jacob Wood of Salem, Oregon, was on her way back to the United States from Tokyo after competing last fall in an ocean race from Hawaii to Okinawa. The Coast Guard cutter *Mellon* was only 240 miles southeast of the stricken sloop when the first distress messages were picked up by amateur radio operators in Alaska and Washington, but the 370-foot cutter's race to aid *Sorcery* was hampered by storm conditions that the Coast Guard reported as 50-knot winds, at times gusting to 90 knots, with seas 35-40 feet high.

The wave that rolled *Sorcery* struck at 1:10 AM on May 8. Ronald Rogers, 27, Banff, Canada, the helmsman, went overboard, and he was held to the yacht by only one shoulder strap after

his safety harness parted. It took three men more than five minutes to haul him from the 44-degree water. Ramona Walters, 22, Escondido, California, who was on watch with Rogers, remained in the cockpit but suffered a compound leg fracture and a broken finger when a 55-gallon drum of diesel fuel in the cockpit broke its lashings.

Below, virtually no one escaped the violence of the roll. Wood, the owner, had a broken rib. Mabel Walters, 50, Ramona's mother, suffered mild contusions. Victoria Allen, Maui, Hawaii, had a separated right shoulder and contusions. Ben T. Choate III, 32, San Francisco, had severe lower back contusions. Aulan A. Fitzpatrick, 28, Greenough, Scotland, had a lacerated scalp. James H. Fry, 26, Calgary, Canada, suffered multiple lacerations on his right leg. Bob Dickson, Long Beach, had severe lacerations to his lip. Rogers, the helmsman, had multiple bruises and mild post hyperthermic shock. Only Ray Hayes of Los Angeles and Sigeo Saito of Tokyo were unharmed.

*Sorcery* started transmitting a Mayday after 6:00 the next morning after a ham radio antenna was rigged and the call was answered about an hour and a half

later by amateur radio operators in Alaska and Washington. With the weather deteriorating, Wood decided to cut the broken mast free, a job which took five hours. Meanwhile, a Coast Guard Hercules 130 aircraft homed in on *Sorcery*'s emergency position indicating radio beacon and dropped two life rafts, another radio, and a data buoy. *Sorcery*'s own rafts had been swept from their deck mounts by the weight of water.

West of the yacht two ships, the Liberian motor vessel *Nego Triabunna* and the Danish motor vessel *Tamara*, steamed to assist *Sorcery* at the Coast Guard's request and arrived on the scene at mid-morning the following day. The *Mellon* arrived that afternoon, put over a boarding party, and in two trips took eight crewmembers off the yacht. Wood, Hayes, and Dickson remained on board with two Coast Guardsmen for the 1,000-mile tow to Kodiak, Alaska. After a short stay in Kodiak, *Sorcery* left again, towed this time by a fishing boat, on her way to Seattle, Washington, for a refit and a new mast. Wood, it was reported, was undaunted and anxious to go ocean racing this summer.



## America Jane III Breezes Through One-Ton North Americans, Wins All but One Race

After playing third fiddle in Division II, Class III of the SORC, and in the One-Ton Worlds last fall, *America Jane III* proved that she had come of age this spring in fresh Chesapeake breezes. George Tooby's Scott Kaufman custom 39 strolled past 15 other competitors, including Ted Turner's world champion *Pied Piper*, a Peterson design, to win the North American One-Ton Cup. By winning four of the five races during the April 27-May 6 series sponsored by the Annapolis YC, A.J. III accumulated 101½ points; while her nearest competitor, the Holland-designed *Jonathan Livingston Seagull*, gained only 86.

On the first day of the series A.J. III had her usual problems with light, fluky winds, and she finished fourth behind *Goldfish*, *Muskrat*, and J. L. *Seagull* on an 18-mile, around-the-buoys course.

The second inshore race began in light air and didn't seem to hold much fortune for A.J. III, but when the breeze piped up to 15 knots, she showed her tail to the fleet. She beat J. L. *Seagull* home by 10 minutes.

The wind blew from the southwest 25-35 knots with heavy rain and gusts for the 130-mile medium-distance race on May 1. While other boats were



Star of the One-Ton North Americans at Annapolis, Maryland, was George Tooby's Kaufman-designed *America Jane III*

bending spars and tearing sails on their trip back from Smith Point, A.J. III led *Pied Piper* on a wet chase to the finish line.

A.J. III used similar breezes to win the third inshore race. This time the Naval Academy's *Fair American*, an also-ran to this point, followed after the American girl from Newport Harbor, California.

*Pied Piper* tried again in the 18-knot southerlies during the 280-mile long-distance event down Chesapeake Bay, but George Tooby drove A.J. III back to Annapolis with her chute set, 30

minutes ahead of Jennings on *Piper*.

A.J. III's victory marks the first time in several years that a Doug Peterson design has not dominated a One-Ton championship.

The top four finishers: 1. *America Jane III*, George Tooby, Newport Harbor Calif. YC, Kaufman design, 101½; 2. *Jonathan Livingston Seagull*, Seagull Syndicate, American YC, Holland design, 86; 3. *Pied Piper*, R. E. Turner, Annapolis YC, Peterson design, 81½; 4. *Yellow Jacket*, Bulman, Scholz, and Winston, Annapolis YC, Heritage 37, 79¼. — Randall S. Pfeffer

Bob Grieser

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## Hot Quarter-Ton Competition Marks San Diego Level Racing Series

The smallest boats came up with the biggest competitive show during the San Diego YC's annual Level Racing Series May 1-3 as the modified Santana 25 *Goose* squeaked through to the overall win in her 18-boat, Quarter-Ton fleet.

It was the second year in a row that *Goose* won her division in this series. In 1975 she swept to victory with the late Wayne Kight at the helm. SDYC Quarter-Ton racing team of Harris Hartman, Dave Neal, and Robin Reighley sailed her this year.

Winning in the other divisions were Hart Isaacs' Peterson Two-Tonner *Vendetta*, California YC; Milt Baehr's Morgan 38 *Bananas*, California YC, One-Ton division; Bill Peterson's Cal 3-30 *El Tigre II*, Cabrillo Beach YC, Three-Quarter-Ton division; and Bob Shinn's Peterson 30 *Vivace*, San Diego YC, Half-Ton division.

One of the most unusual boats in the regatta was the new Gary Mull design *Spread Eagle*, a Quarter-Tonner barely completed in time for the competition. Owned by Paul Erickson of Sausalito YC, the Mull 27 got off to fast starts in the first two races and held her edge around the course with *Goose* running second both times. Then *Goose* won the third, overnight race

and put a boat between her and *Spread Eagle* to win the series. At the end of the regatta *Spread Eagle* dropped back to sixth place overall after being disqualified from the second race in a port-starboard protest.

*Duck Soup*, a lightweight, hard-chine boat, designed and sailed by Bill Rogers of Los Angeles YC, took second overall in the Quarter-Ton division behind *Goose*. *Duck Soup* had a 3-3-2 record behind *Goose*'s 2-1-1. Doug Alford's San Juan 24 *Dynamite* from SDYC was the third with 5-2-5.

## Russian Barque Wins First Leg of Tall Ships Race

The 270-foot three-masted Russian barque *Tovarisch* won the first leg of the Sail Training Association's Tall Ships Race on corrected time. Starting May 2 at Plymouth, England, four Class A square riggers and 35 other training ships raced the 1,425 nautical miles to Tenerife, Canary Islands, on the first leg of a three-part race to Newport, Rhode Island, via Bermuda.

First to finish was the 77-foot British ketch *Great Britain II*, but on corrected time she finished well down on Class B-2 (training ships with spinnakers).

Second in Class A and second overall was the Russian four-masted, 375-foot barque *Kruzenshtern*. The

Shinn's new Peterson Half-Tonner *Vivace* scored the only perfect 1-1-1 record in the 52-boat fleet as Shinn and co-skipper Robbie Haines of SDYC led their class at every mark during the three-race series. The Wylie 28 *Preamble* sailed by Saint and Terry Cicero of Newport Harbor YC was the second Two-Tonner overall with 5-2-2.

The defending Three-Quarter-Ton Champion *El Tigre II* returned to San Diego this year and won again with a 1-1-4 series. Mike Busch's Ranger 32 *Skookum* took second. —Vern Griffin

other finishers in Class A were the 205-foot Norwegian training ship *Christian Radich*, third, and the 291-foot Polish *Dar Pomorza*, fourth.

Fifth overall and first in Class B was the *Sir Winston Churchill*, a 153-foot topsail schooner carrying a full crew of women cadets.

Class B-2 was won easily by the Spanish sloop *Tenerife*, one of the smallest boats in the race.

Three West German vessels: *Stor-tebeker*, *Germania VI*, and *Walross III*, plus the French boat *Glenan* were disqualified for not having at least half their crews made up of trainees.

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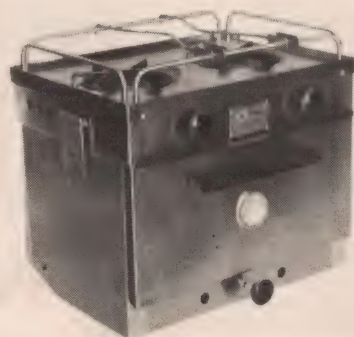
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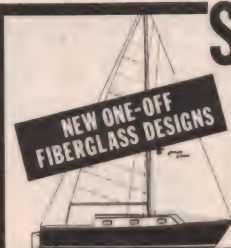
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## Antigua Sailing Week Was All Things to All Sailors: Racing, Cruising, Traditional, and Multihull

Rather than a strict race week, Antigua Sailing Week can be compared to the gathering of the clans in Scotland for the Highland Games. Some come to compete hard in the five races in hot boats; other race not so hard in the cruising class where no spinnakers are allowed; others come to provide a picturesque background racing their gaff-rigged boats in the traditional class; while other boats come just to follow the race and attend the parties. In all 63 entries in the five divisions competed May 7-15, and 160 boats were anchored in English Harbor by the end of the week.

Every year there is a star of the week, usually in either the cruising or traditional divisions. This year it was Gary Hoyt's Halsey Herreshoff-designed *Freedom 40*, a centerboard cat ketch with stayless masts and loose-footed sails sheeted to wishbones. Her speed off the wind was to be expected, but she also distinguished herself to windward, easily winning the cruising division followed by *Bacco*, a 30-foot-long, 30-year-old wooden sloop, beautifully sailed by David Simmons on a week's vacation from running Antigua Slipway.

Antigua Sailing Week was notable for the return of the "big 'uns" to the



Gary Hoyt's Herreshoff-designed *Freedom 40*

racing division, where they distinguished themselves by giving the smaller boats, even modern IOR boats and One-Tonners, a hard time.

Had *Chubasco*, a 1939 S&S-designed yawl sailed by D. Haskell, not been penalized 20 percent in the third race, she would have won the big division and been second overall. As it was, she was only 1½ points overall behind *Guenevere of Wessex*, a High Tension 36 One-Tonner in the Racing Class I. *Chubasco* not only won the last long race, but also succeeded in winning over the 16.5-mile Olympic course. *Jibaro*, the Swan 44 from Puerto Rico, sailed by J. Torres, was third overall in Racing Class I.

The five days of racing were, as usual, notable for plenty of wind with whole sail or reefed-down conditions each day and sails blowing out with great regularity. The "foreign invasion" was successfully turned back by the old West Indian hands. Hovey Freeman of Puerto Rico sailed the Creekmore-designed and built and Freeman-modified Three-Quarter-Tonner *Poker Chip* to convincing wins both overall and in the small racing division (Class II). She was followed by *Morning Tide*, a nine-year-old S&S 34, owned by the Byerley/Farrar/Squire/Spillane syndicate, brilliantly sailed by Joe Byerley into second place in Class II and second overall.

—Don Street

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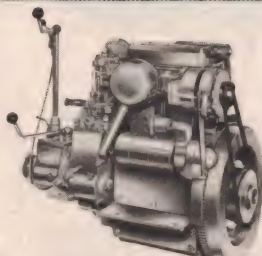
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## Royal Sydney Yacht Squadron Formally Withdraws Challenge for America's Cup

The Royal Sydney Yacht Squadron of Australia has formally withdrawn their challenge for the America's Cup on behalf of the Matilda Syndicate when it became apparent that the \$1.5 million (Australian) needed to fund the challenge could not be raised in time. The formal announcement confirms a report of the intended withdrawal in the "Ahead and Astern" section of SAIL, May 1976.

Matilda Syndicate leaders Jim Hardy, Alan Payne, and Peter Cole

concluded, reluctantly, that not enough of the total could be raised for Payne to begin realistic tank testing. Hardy, who skippered *Gretel II* in 1970 and *Southern Cross* in the 1974 challenge, said Payne would have to have completed his design in time for the keel to be laid in August 1976. This is now impossible.

"It's a pity," said Hardy. "I really felt, following the example of *Intrepid*, the West Coast USA defense candidate in 1974 which was strongly supported by

public subscription, that the concept was there for a people's boat."

This leaves Alan Bond as the sole Australian challenger for 1977. Bob Miller and Johan Valentijn are said to be on their fourth model in the Delft towing tank, Holland. Bond announced that his new 12-Meter will be built of aluminum in Perth, beginning in June or July. It is possible that Bob Miller, who represented Australia in Solings at the 1972 Olympics, will steer it.

—Bob Ross

## Ballyhoo Wins China Sea Race; US Entry Wins New Shellback Trophy

Jack Rooklyn's powerful Australian entry *Ballyhoo* neatly cleaned the awards table in the eighth China Sea Race between Hong Kong and Manila. *Ballyhoo*'s crew drove the 72-foot sloop to first in the China Sea Series, first in the China Sea Race, first in Class I, and line honors, as well.

This superbly-organized 602-mile race sponsored by the Royal Hong Kong and Manila YCs started with the largest fleet ever as a result of increasing international interest that brought boats from Australia, Japan, the Philippines, and Hong Kong as well as expatriate crews sailing Hong Kong boats

for the United States, England, and Scotland. The race counts as an alternate event in the World Ocean Racing Championship.

This year's start was delayed one day for some assurance that Typhoon Marie's 150-knot center would not cross the course. As it turned out, lack of wind was more of a problem as the fleet sailed into bleak windless holes along the Philippine coast. The unusual wind conditions caused some boats to take as long as three days to finish the last 75 miles of the course.

New to this year's race was the Shellback Trophy for cruising boats. The

United States was well represented when this award was taken by Bob Stevens and John Cummings in *Sapphira*, a stock Cape Carib 33. The victory will no doubt add to Mr. Stevens reputation as Hong Kong's foremost zero-wind sailor, earned by his eccentrically fleeing his office specifically to sail on windless days.

The results, overall: 1. *Ballyhoo*, Jack Rooklyn, Australia, 72-foot Bob Miller design; 2. *White Rabbit II*, John Ma, Hong Kong, Carter 39; 3. *Mamamouchi*, Ron MacAulay, Hong Kong, Nicholson 55.

—Sheppard Root

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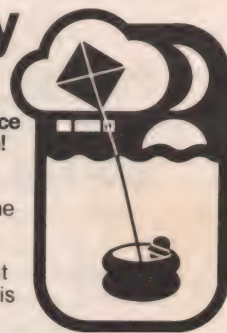


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## Rough Weather, Equipment Failures, Delays Cut into Three-Quarter-Ton North American Fleet

Ten boats registered, but only eight arrived for the start of the Three-Quarter-Ton North Americans held May 11-21 at the Hampton, Virginia, YC.

*Marmalade* from the Grosse Point Sailing Club wasn't finished in time, and *Silver Fox* from the Royal Canadian YC fell off its trailer enroute. For a time it even looked as if *Swampfire*, the defending champion, owned by Billy Hunt Jr. and Bill Reese of Hampton, wouldn't be able to race, either. But thanks to Harry and Audrey Mitchum, *Swampfire's* new mast arrived in time.

## Southern Ocean Racing Conference Dates Set

The officers of the Southern Ocean Racing Conference have finalized the race dates for the 1977 SORC: Anclote Key, January 29; St. Petersburg to Fort Lauderdale, February 2; Ocean Triangle, February 11; Lipton Cup, February 18; Miami to Nassau, February 21; Nassau Cup, February 25.

The owners of all boats that participated in the 1976 SORC are currently being polled to see whether they would like to substitute for the Anclote Key Race, a race from Key West to St. Petersburg, starting January 22. A final decision will be made the end of July.

The Mitchums were delivering a truckload of celery to Connecticut from Newport Beach, California, where the new mast was waiting. The husband and wife team stuck the mast out of one of the vent doors on the refrigerated rig. In four days of numerous mishaps and \$200 worth of fines and state permits, they finally arrived in Hampton, Sunday, May 9.

The new mast didn't help them much on Thursday, however, as a headstay fitting broke on the way to the start of the first 25-mile Olympic course race. The boats were bucking strong winds and rough water along with rain and cool temperatures which prevailed throughout the series. In the absence of *Swampfire* Wharton's and Creger's Wiley-designed *Tortuga* finished first with J.S. Waldron's *Annie*, a Carter design, taking second and Daniel Van Heeckeren's *Vanpire*, a Mull 34, taking third. *Vanpire* is the sister design of *Swampfire*, also a Mull 34.

In the second and third races *Swampfire* came into her own. She finished the second 25-mile race six minutes ahead of *Vanpire* with *Annie* in third. The third, medium-distance (150 miles) race saw the three boats finish in that order again.

*Annie* managed to pull off a win in

the fourth, 25-mile Olympic course with *Vanpire* second, *Swampfire* third.

*Tortuga*, *Southerly*, and *Swampfire* did not start the last 300-mile race to Cape May, New Jersey, and back. The non-starters saved themselves quite an ordeal as a storm hit the remaining five-boat fleet 30 miles northeast of the Chesapeake Light Tower with winds sustained at 60 mph and more with 10-15-foot seas. Skipper John Hanna on *Nighthawk* stayed at the helm of his boat for 6½ hours unaided while drifting and riding out the storm, as his crew was too sick to help him. Hanna; W.F. Peach, skipper and owner of *Revenge*; and E.H. Harris, skipper and owner of *Mystere*; dropped out of the race with beat-up crews and blown-out sails. Only two boats, *Vanpire* and *Annie* finished the race.

The results: (1) *Vanpire*, D.W. Van Heeckeren, Mull 34, 47; (2) *Annie*, James S. Waldron, Carter design, 44.25; (3) *Swampfire*, Hunt & Reese, Mull 34, 26.625; (4) *Mystere*, E.H. Harris, Morgan design, 19.5; (5) *Tortuga*, Creger & Wharton, Wiley design, 17.25; (6) *Revenge*, W.F. Peach, C&C design, 15.5; (7) *Southerly*, T.N. Hunnicutt, Carter design, 14; (8) *Nighthawk*, J.A. Hanna, Morgan design, 8.5. — Carl F. Johnson

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## MAJOR SAILING EVENTS

### July

- 2-12 ... IYRU World Youth Sailing Championship, Royal Canadian YC, Toronto, Ont., Canada
- 3-5 ... Marina Del Rey to San Diego Race, Windjammers YC, Marina Del Rey, Calif.
- 3 ... Victoria, British Columbia, to Maui, Hawaii Race, Royal Vancouver and Lahaina YCs
- 4 ... Parade of Sail (Op Sail '76), New York Harbor
- 5-18 ... 420 Worlds, Barrington, RI, YC
- 10-11 ... Comet North Americans, Raritan YC, Perth Amboy, NJ
- 10 ... Lake Erie Race, North Cape YC
- 10 ... Parade of Sail (Op Sail Boston) Boston Harbor
- 14 ... Marblehead, Mass. to Edgartown, Martha's Vineyard Race, Corinthian and Edgartown YCs
- 17 ... Port Huron to Mackinac Race, Bayview YC, Detroit, Mich.
- 17-18 ... USYRU New England Regional Youth Championship, Black Rock YC, Bridgeport, Conn.
- 17-18 ... Shark North Americans, Canandaigua, NY, YC
- 19-27 ... Sailing Events, Olympic Games, Kingston, Ont., Canada
- 20 ... Return Race to Europe for fully-crewed Jester Class entries in OSTAR, Newport, RI, to Horta, Azores; *Voiles et Voiliers* and La Societe Nautique de la Baie de Saint Malo.
- 24 ... Bicentennial '76 Cruising Race, Boston, Mass., to St. John, New

Brunswick, Blue Water Cruising Club

- 24 ... Sarnia, Ont., to Alpena, Mich. Race (MORC), Lake Huron
- 24 ... Chicago to Mackinac Race, Chicago, Ill., YC
- 24-25 ... U.S. Sailing Center Team Racing Championship, Association Is., NY
- 25-30 ... USYRU Women's events: Adams Memorial (doublehanded) and Mertz Trophy (singlehanded), University of Wisconsin, Mendota Lake, Wis.
- 27-30 ... Daysailer North Americans, Palo Alto, Calif., YC
- 29-31 ... Friendship Sloop Days, Friendship, Maine
- 29-Aug. 6 ... Snipe Nationals, US Sailing Center, Association Is., NY
- 31-Aug. 1 ... Lake Michigan Swing Keel Championship, Waukegan, Ill., YC
- 31-Aug. 1 ... USYRU Southeast Regional Youth Championship, Columbia Sailing Club, Columbia, SC

### August

- 7-14 ... 1976 Regatta Week, Lake Yacht Racing Association, Lake Ontario
- 8-11 ... USYRU Sea Explorers Nationals, Southern YC, New Orleans, La.
- 10-16 ... Fireball Worlds, St. Margaret's Bay, Nova Scotia
- 10 ... Return Race to Europe for fully-crewed Jester Class entries in OSTAR, Horta, Azores, to Saint Malo, France; *Voiles et Voiliers* and La Societe Nautique de la Baie de

Saint Malo

- 12-20 ... Lightning North Americans, Sheboygan, Wis., YC
- 14-15 ... MacGregor Cup (trailerable sailboats), Newport Beach, Calif.
- 14 ... Monhegan Island/Manana Race, Portland, Maine, YC
- 14-21 ... Thistle Nationals, US Sailing Center, Association Is., NY
- 20-28 ... Star North Americans, Cottage Park YC, Winthrop, Mass.
- 21-23 ... Force 5 North Americans, US Sailing Center, Association Is., NY
- 21-25 ... Laser North Americans, Beverly YC, and Tabor Academy, Marion, Mass.
- 21 ... Lake Ontario International Race (Toronto to Rochester, NY)

### 1976 World Level Racing Championships

#### August

- 2-15 ... One-Ton, Societe Nautique de Marseille, Marseille, France
- 16-30 ... Three-Quarter-Ton, Royal Ocean Racing Club and Royal Thames YC, Plymouth, England
- 20-30 ... Mini-Ton, Cercle de la Voile de Paris, and Ste des Regates Rochelaises, La Rochelle, France
- 31-Sept. 12 ... Two-Ton, Kieler YC, Kiel, West Germany

#### September

- 14-26 ... Quarter-Ton, Corpus Christi, Texas, YC
- 16-26 ... Half-Ton, Yacht Club Adriaco, Trieste, Italy

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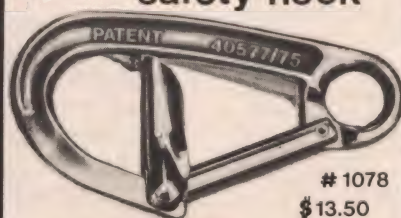
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# Book Reviews

**FRANCIS CHICHESTER**, by Anita Leslie; Published by Walker & Company, 720 Fifth Avenue, New York, NY 10019

254 pages

\$9.95

I read Anita Leslie's (Mrs. King's) biography of Francis Chichester with a great deal of interest and curiosity to see what image this rare man had reflected upon her mind's viewing screen. From the first line it is obvious that she is a skilled professional writer with a free-running style that is easily devoured.

The biography reveals his life from birth to death and unveils Chichester's many and varied talents, each one a separate career in itself. Poor eyesight from early childhood became his cross to bear and played an important part in his early development, driving him to best his fellow man to prove he was equal.

He took to the air during the 1920s when flying was still looked upon as an occult art. He "Lindberghed" about Europe and the Pacific, narrowly escaping death when *Gipsy Moth* simulated a wounded bird and fell to earth. During WWII he contributed more than his share by teaching navigation to the R.A.F. A prosperous map-making business in London would have encouraged anyone else to sit back and rest on his laurels in the safe atmosphere of his club, but not Chichester. He started solo sailing well after reaching the 50 mark.

For the next 20 years he sailed a succession of four *Gipsy Moth* boats. He learned to ocean race in his tiny cutter, *Gipsy Moth II*, but came into his own in *Gipsy Moth III*, the 39'7" Robert Clark design in which he won the first Transatlantic Race in 1960, and placed second to Eric Tabarly in the 1964 contest. The John Illingworth/Angus Primrose-designed 54-foot *Gipsy Moth IV* took Chichester around the world in 1966-7, the high point of his singlehanded sailing career. In the Robert Clark-designed *Gipsy Moth V* Chichester sailed a triumphant 18,581 miles solo around the Atlantic before experiencing the bitter disappointment of having to turn back to England during the 1972 Transatlantic Race because of ill health. He died about one month later.

There are a couple of failings in the book. One could be typographical, that is, calling Bill Snaith of *Figaro* Bill Smith. I also wish that the author had elaborated on the basic principle behind "Blondie Hasler's Single-

handed Transatlantic Race." Other than these, the text is reliable and informative.

Beauty, of course, is in the eyes of the beholder. When in the presence of Chichester I saw and caught the essence of a person who possessed that unknown chemistry which drives a sparse group of the world's population of men and women to and beyond greatness. This "breed" never fully understands how or why they react as they do when faced with death or disaster. It is impossible for any mortal to comprehend fully the complexity of the "Chichesters" of this or any other world.

— Bill Verity

*William Verity is a sailor, author, and adventurer who was personally acquainted with Francis Chichester. In 1975 Verity built and sailed a replica of the Bounty launch from Tofua, Tonga, to Kupang, Timor, retracing the voyage of William Bligh and the crew of the Bounty after the mutiny. An account of this historic trip will be forthcoming in a future issue of SAIL. —Ed.*

## **COASTAL NAVIGATION STEP BY STEP**, by Warren Norville; Published by International Marine Publishing Company, 21 Elm Street, Camden, Maine 04843

203 pages

\$15

There's good news and there's bad news in this volume; but I'll start out with the facts. There are 22 short chapters leading the navigational neophyte through what is sometimes a perplexing maze of detail in the most difficult of all navigations—coastal navigation.

The untutored sometimes assumes that when one is within sight of lights, markers, mountains, and all other landmarks useful in navigation, that determination or calculation of geographic position is then sure and easy. 'Tain't so! Things can *really* go to pot when the yachtsman takes coastal navigation for granted. An abundance of visual navigational aids can be sometimes as bad as a paucity thereof, because the chances of careless misidentification (and mislocation) are multiplied.

Norville hangs his subject together fairly well, and he explains the use of the tide, current, and visibility tables very well. He also explains in good, easy fashion some of the coasting techniques described in much more difficult language in the heavier navigational texts and official government publications.

I am especially impressed with his details of the use of the sextant for hori-

zontal and vertical sextant angles. These navigational techniques are far too often neglected in coasting, probably because one commonly uses an astronomical sextant for a problem which can be solved practically using an instrument having far less precision. Those who have had a little training in the meaning of significant figures will not be bothered by this and will lop off the unwarranted detail to obtain completely adequate results.

Now for the bad news. There are a few parts of the book which are simply incorrect. Also, the publisher did the author no favor when he reduced some print and figures a little beyond my personal limits of unaided visibility. Nevertheless, these discrepancies and irritations should not detract significantly, and they probably won't cause you to fetch up on a shoal. For example, Norville's dissertations on the Mercator Projection are nonsense, mathematically-speaking, although his ultra-simplified explanation is adequate enough for a general idea of the chart in waters most commonly navigated by yachtsmen. His chapter on compass error and its determination is not bad, except for some of the illustrations which take much thought. But I do wish that Norville had stressed the ease and necessity of *correction* of compass deviation.

The chapter on radio navigation is good and very useful, but the tables he gives for bearing correction for Great Circle routes are totally irrelevant. The other deviational (frequency-dependent) and observational errors overshadow these by an order of magnitude and are added, I assume, for the sake of understanding the theory. His loran chapter is fine, but refers only to loran-A which is being phased out in favor of loran-C. Fortunately, the general idea of both is similar, so only good is done.

In spite of these criticisms, I recommend this book as an adequate text for the yachtsman sailing in coastal waters. It's full of good, solid information, which when seriously studied can do nothing but enhance the knowledge and qualifications of the reader.

— William V. Kielhorn

## **Books Received—some of which may be reviewed in future issues:**

**THE MARINER'S CATALOGUE, Volume 3**, Edited by George Putz and Peter H. Spectre; Published by International Marine Publishing Company, 21 Elm Street, Camden, Maine 04843  
190 pages, paperback \$5.95

**THE CIRCUMNAVIGATORS**, by Donald Holm; Published by Prentice-Hall, Inc., Englewood Cliffs, NJ 07632  
496 pages \$12.95



**SHIPWRECKS OF THE WESTERN HEMISPHERE**, by Robert F. Marx; Published by David McKay Company, Inc., 750 Third Avenue, New York, NY 10017

482 pages \$11.95

**HOW TO WATCH THE OLYMPIC GAMES, SUMMER 1976**; Published by Quadrangle/The New York Times Book Company, 10 East 53rd Street, New York, NY 10022

295 pages, paperback \$6.95

**1976 YACHTSMAN'S GUIDE TO THE GREATER ANTILLES** (Virgin Islands, Puerto Rico, Dominican Republic, Haiti), Edited and Illustrated by Harry Kline; Published by Tropic Isle Publishers, Inc., 1025 NW Fifth Avenue, Delray Beach, Fla. 33444

256 pages, paperback \$4.95

**CRUISING DESIGNS, POWER AND SAIL**, by Edward S. Brewer, in association with Robert E. Wallstrom; Published by Seven Seas Press, 32 Union Square, New York, NY 10003

144 pages, paperback \$4

**MULTIHULL SEAMANSHIP**, by Michael McMullen; Published by David McKay Company, Inc., 750 Third Avenue, New York, NY 10017

200 pages \$12.50

**MAKE YOUR OWN SAILS**, Revised Ed., by R. M. Bowker and S. A. Budd; Published by St. Martin's Press, 175 Fifth Avenue, New York, NY 10010

142 pages \$3.95 paperback, \$6.95 hardcover

**TRIMARANS: AN INTRODUCTION, 3rd Revised Edition**, by D. H. Clarke; Published by Transatlantic Arts, Inc., North Village Green, Levittown, N. J. 11756

126 pages \$15

**COASTAL CRUISING**, by Colin Jarman; Published by Transatlantic Arts, Inc., North Village Green, Levittown, NY 11756

280 pages \$18.50

**SINGLEHANDED SAILING** by Richard Henderson; Published by International Marine Publishing Company, 21 Elm Street, Camden, Maine 04843

304 pages \$15

**WIN MORE SAILBOAT RACES**, by C. Stanley Ogilvy; Published by W. W. Norton & Company, Inc., 500 Fifth Avenue, New York, NY 10036

132 pages \$8.95

**CREWING RACING DINGHIES AND KEELBOATS** BY Bob Fisher; Published by Stanford Maritime Ltd., 12 Long Acre, London WC2E 9LP

160 pages £3.50

**SELF STEERING YOU CAN BUILD**, by W. A. Wensel; Published by Wensel Sailing Enterprises, 2091 Highway West, Grafton, Wisconsin 53024

25 pages, paperback \$7.50

**THE MARINE PAINTINGS OF CHRIS MAYGER**, Edited and Introduced by David Larkin; Published by Peacock Press/Bantam Books, Inc., Bearsville, NY 12409

40 color plates, paperback \$6.95

**ADVANCED RACING TACTICS**, by Stuart H. Walker, M.D.; Published by W. W. Norton & Company, Inc., 500 Fifth Avenue, New York, NY 10036

399 pages \$15

**ULTIMATE NORTH**, Canoeing Mackenzie's Great River, by Robert Douglas Mead; Published by Double-

day & Company, Inc., 245 Park Avenue, New York, NY 10017

312 pages \$10

**BOWDITCH FOR YACHTSMEN: PILOTING**, Selected from American Practical Navigator, by Nathaniel Bowditch; Published by David McKay Company, Inc., 750 Third Avenue, New York, NY 10017

306 pages \$9.95

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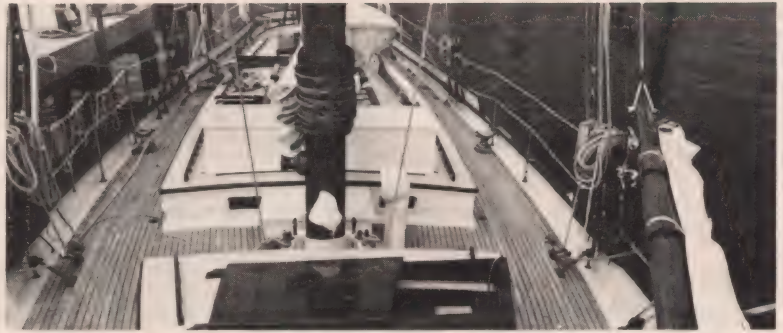
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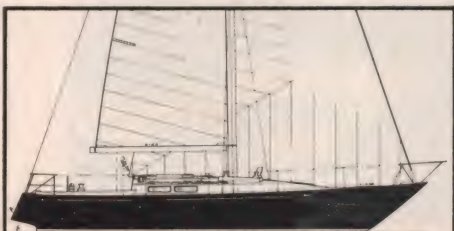
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 7 berths. Rebuilt Atomic 4. Wheel. Race equipped w/10 sails, Loran A, 25W VHF, RDF, KMX, AWI. \$31,000.

**35' ALDEN AUXILIARY SLOOP—1946**  
 Mahogany on oak, bronze fastened w/lead ballast. 1969, 30 HP Gray. 4 berths. All cruising gear. \$17,500.

**INGRID 38 KETCH—1975**  
 FG, double ended, heavy disp., double head rig ketch. Highest quality construction/finish. 5 berths. Fully outfitted & commissioned but never cruised.

**TIDE WATCH 39 KETCH—1972**  
 FG, aft-cabin, CB, diesel. Best performing aft-cabin design of this size. Raised forward deck. Well equipped. 2 available.

**BERMUDA 40 YAWL—1971**  
 Lavishly eqpt: 2 RT's, 2 speedo's, recording DS, radar, autopilot, elec. refig./freezer, Hood sails. \$80,000.

**WHITBY 42 KETCH—1974**  
 Incredibly popular center-cockpit-aft-cabin cruiser. Fine FG construction. Teak decks. Unusually complete inventory. \$88,000.

**42' 6" BOLGER AUXILIARY SCHOONER—1968**  
 Recent vintage schooner classic. Well built. 9 berths. Modern accessories: 37 HP diesel, VHF, UHF, RDF, KMX & log, digital DS.

**C&C 43 SLOOP—1973**  
 Keel, rudder, prop. modified, '75. Custom spars. All Barients. 16 sails. Teak interior. Very clean and competitive @ IOR 37.6.

**47' OLYMPIC ADVENTURE KETCH—1975**  
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**47' 8" HOOD CENTERBOARD YAWL—1968**  
 Steel & FG hull. Beautiful lines and teak appointments. Sleeps 9. Offered completely equipped & fully commissioned for circumnavigation.

**48' ALDEN AUXILIARY CUTTER—1938**  
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**LITTLE HARBOR 50 YAWL—1969**  
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 Qualified world cruiser in FG. '74 diesel. Alum. spars—tall rig. Radar, Loran, autopilot. Very well cared for. In New England.

**51' GARDEN STEEL KETCH—1969**  
 Custom design/constr. for world cruising. Emphasizing safety, comfort, performance, self sufficiency. Many special features.

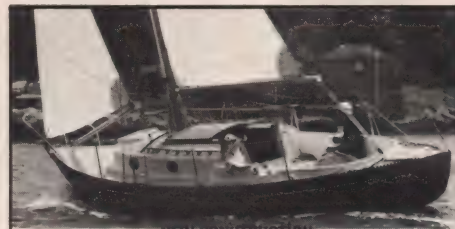
**BOWMAN 57 MK III SLOOP—1976**  
 Center-cockpit-aft-cabin, FG hull w/teak decks. Fully equipped, commissioned and ready for immediate delivery.

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 World renowned classic. Finest orig. constr. & after 10,000 man hour refit, she is in "as new" condition. Truly one of a kind.

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## NEW CONSTRUCTION VINEYARD VIXEN DIESEL SLOOP

29' 7 1/2" x 23' x 8'6" x 4'6". Designed by Thomas Hale and son and built in fiberglass and teak by Marthas Vineyard Shipyard, Inc. Undoubtedly the most interesting and best qualified small cruising design of recent years. Call or write for specifications.



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42' 7", 4' BU. Mahogany & cedar on oak, teak decks, bronze fastenings, built 1959. Traditionalist's delight offers lovely lines, reliable performance, standard 6 berth layout w/galley and chart table aft. Well equipped and well cared for. Call for full details.



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1964, 47' Hood/Maas diesel CB yawl built of FG covered steel w/teak decks & trunk. Beautiful to behold, responsive and manageable, strong and seaworthy, roomy and comfortable, completely equipped: she is everything a cruising boat should be.



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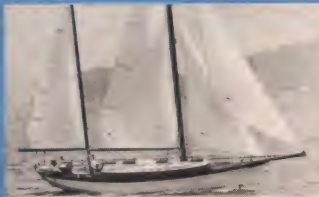
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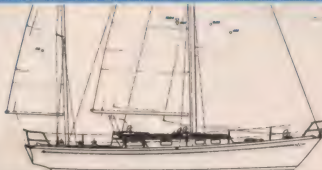
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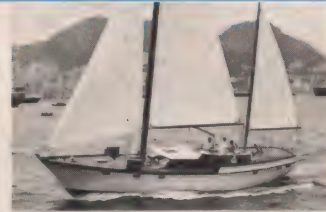
Cheoy Lee Clipper 42. New 1976 layout. Available in 3 int. layouts. Plan C arriving at our docks in immediate future. Make appointment to sail a Clipper series Cheoy Lee in Florida. Sail away under \$76,000.



Cheoy Lee's newest design. The Offshore 41. Available in sloop, yawl or ketch. Quality construction, priv. owner's strm., circular dinette, teak throughout. Available at special introductory price of \$59,500. Send for complete brochures.



1976 Cheoy Lee Midshipman 52, the Queen of the Midshipman series, available for immediate shipment, 3 private staterooms, 7.5 KW Onan, full sail away package, delivery East Coast U.S. \$168,500.

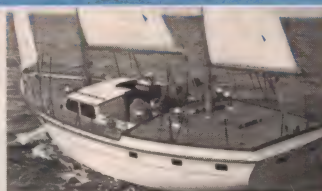


Cheoy Lee Offshore 53. Top of the line of quality yachts. Full powered diesel ketch by Alden has all luxury features. Avail. light or heavy weather rig. She will go anywhere you want her to.

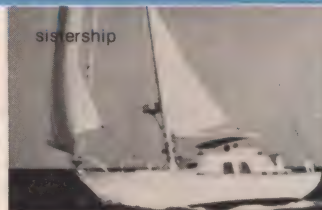
## SELECTED BROKERAGE OFFERINGS



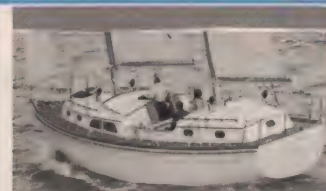
50' 1959 Cheoy Lee Offshore 50 ketch. John G. Alden design. Proven passage maker and comfortable in any sea. Eqpt for offshore sailing, including 7.5 KW Onan, reverse cycle air, full electr, can be purchased below replacement cost.



44' 1975 Cheoy Lee Offshore 44, John G. Alden design. Built to withstand any offshore use. In commission and available in Florida at substantial savings of replacement cost. Yacht cond. Asking \$112,500.



52' 1968 Rhodes MS. Mercedes dsl, Loran, SSB, radar, A/C, autopilot and much more. More than fair share of cruising equipment. Excellent condition. Seriously for sale. Asking \$155,000.



36' 1974 Cheoy Lee Midshipman diesel ketch. Luders design. Like new. Outfitted w/finest equipment. Streamstay furl., full instruments. Available immediately. Great savings at \$57,500.

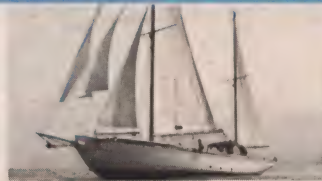
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71' 1934 S & S designed CB yawl. 6' board up draft, Mercedes diesel, autopilot, Loran, believed structurally sound and should stand rigid survey. A large owner's strm aft, guest strm, large salon and spacious crew quarters. Asking \$67,000.



Cruise the world in comfort in this 89' 1950 S & S MS. Twin GM 671 diesels, luxurious throughout. Owners stateroom with bathtub, two guest strms plus crew quarters. Spacious salon, fully fitted for ocean going comfort. Asking \$385,000.

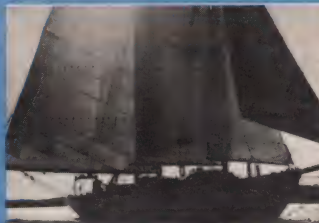


66' twin diesel aux ketch by DeVries Lentch. Cruise in gracious comfort. This yacht was rebilt from the keel up in 1962 and is offered for less than the cost of her refit. Owners strm w/ bath, guest strm, can sleep up to 15. Exc cond. Asking \$140,000.

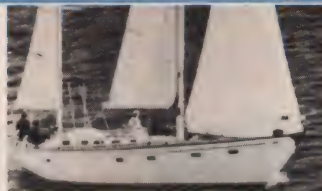


Comfort personified aboard this 81 Rhodes designed Burger built. Shoal draft, twin diesel masterpiece, 6'6" draft board up. Exc acc fully found. Crew maint and should stand rigid survey. Exc value. Asking \$350,000.

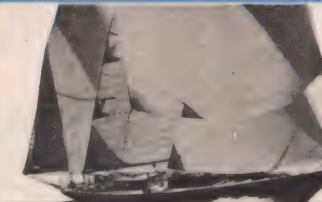
SEND FOR COMPLETE *CheoyLee* BROCHURE. \$1.00 HANDLING



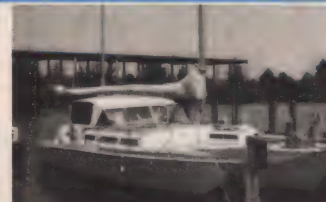
61' 1932 Marconi rigged Schooner. Compl. refurbish 74-75. 7.5KW Onan, refrig, freezer, etc. New S/S rigging. Perfect charter vessel. Owner anxious. Asking \$125,000.



46' 1973 LeCompte diesel ketch, Loran, RDF, Kenyon instr., 7 bags of sails, and much more. Owner's private strm w/ private head. Ideal shorthand cruiser in immac. cond. The best anywhere. Seriously for sale. Asking \$115,000.



73' 1966 McClear & Harris/Abeking & Rasmussen custom alum ketch. Full compl. sails & electronics. Yacht condition. Sleeps 11. Offered at fraction of replacement. Asking \$220,000.



41' 1970 Piver design custom blt Trimaran. Truly loaded with extras—2 gens., refrig, autopilot, central vacuum plus \$2,500 worth of spare parts. Recently repainted. Asking \$60,000.

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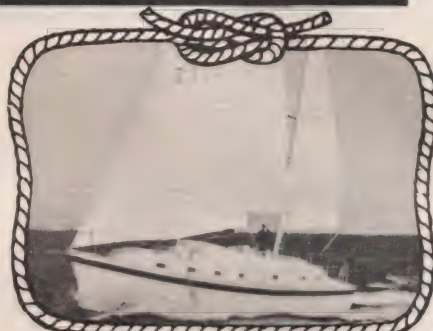
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**51' Island Trader - 1975.** Ford Lehman 6D380 diesel. Brand new model of a popular imported auxiliary. Heavy built sea boat w/lovely layout. \$110,000. (Sistership).



**32' Challenger Sloop - 1974.** Chrysler/Nissan diesel, 70 HP. Speed: 8.6 kts. Sleeps 6 (2 doubles & 2 singles). A tremendous amount of liveability in only 32' of vessel.



**44' Gulfstar Motorsailer Ketch - 1974.** Perkins 130 HP, FWC diesel. Better than new condition. Expertly rigged for single/short handed family cruising. \$79,000. (Sistership).



**62' Auxiliary Ketch - 1973.** GM 4-71 diesel. Construction of double planked select Burma teak. 2 cockpits - accommodates 7 in owner's party. Capable of cruising 8.5 kts.

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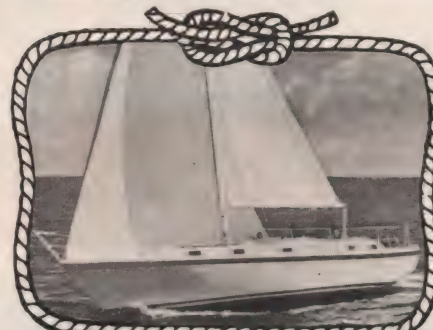
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**51' Morgan Out Islander - 1975.** 103 HP Chrysler Nissan 6 cyl. diesel. Absolutely in Bristol, sailaway condition. Discriminating owner. Only \$178,000. (Sistership).



**53' Gulfstar Ketch Rigged Motorsailer - 1974.** Perkins 6-354 diesel. Sleeps 10. Lavish care by original owner. Simply breathtaking. \$150,000 asking. (Sistership).



**41' Gulfstar - 1973.** Perkins 47HP diesel. Has dingy with outboard power. Sleeps total of 7. Center cockpit walk thru aft cabin sloop. Price reduced \$3800. (Sistership).



**73' Ketch - 1966-67.** GM4-53N diesels. 140 HP each. Sleeps 8 + 3 crew. This sleek ketch was a Transatlantic winner in 1972. Features large galley — a real cruising yacht.



**44' Cheoy Lee Offshore Ketch - 1974.** Volvo MD-32A diesel. Cruises 7.5 kts. at 2500 RPM. Sleeps 6 - "great" owner's cabin. Top optional equipment added. Long run cruises.



**41' Morgan Out Islander Ketch - 1973.** Diesel auxiliary. Mechanical refrigeration, Kenyon sailing instruments, VHF, SSB & auto tracking Loran. \$55,000. (Sistership).



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**52' HOOD '67 YAWL**, shoal draft (4'6") keel/cb, super-strong steel constr, 2 priv strms + sep crew's qtrs, beaut wood int \$105,000

**51' GARDEN '73 KETCH**, heavy displ (52000#) offshore crsr, Perkins 4-107 fwc dsl, 7.5 KW aux gen, refrig, inside steering sta \$95,000

**48' SWAN '72**, aft-cbn, aft-ckpt, Volvo 75 hp dsl, teak decks, 17 Hood sails, 3-spd grinder \$150,000

**45' FASTNET '70**, aft-cbn, aft-ckpt, Westerbeke 4-107 fwc dsl, beaut wood int, propane stove w/ oven, refrig, anchor windlass \$85,000

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**41' MORGAN '72 OUT ISLAND**, aft-cbn, cntr-ckpt, Perkins 4-107 fwc dsl, rol furl genoa, club-ft jib \$55,000

**41' PEARSON '74 419**, cntr-ckpt, aft-cbn w/walk-thru Chrys fwc dsl, rol furl genoa, dodger \$67,000

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**38' YANKEE '73**, Westerbeke 4-91 fwc dsl, gd electr inv, 17 sails, 8-man raft \$49,000

**37' TARTAN '68**, strong, traditional crsr, '75 Atomic 4 fwc, 7 sails \$35,500

**36' PEARSON '72**, full race, 11 sails, rod rig, hydraul backstay adj, h/c press wtr \$39,500

**35' C & C '71**, one of best all-around boats ever, gd electr inv, 8 sails, h/c press wtr \$33,500

**35' PEARSON '72**, Westerbeke 25 hp fwc dsl, rol furl genoa, h/c press wtr w/shwr \$33,500

**35' HINCKLEY '66 PILOT**, heavy, traditional crsr w/beaut varn wood int, h/c press wtr \$40,000



**33' CARTER '73**, Volvo 10 hp dsl, 9 sails, shwr \$31,500

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**31' DUFOUR '74**, Volvo 25 hp dsl, d/f, speedo, log, RDF, AWI, WSI, 9 sails, whl, 6-man raft \$35,000

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**29' NANTUCKET '72 YAWL**, Volvo 25 hp dsl, clipper bow w/sprit, teak decks, '75 dodger \$22,000



**27' C & C '73**, gd electr, 6 sails, 2 bulkhead compasses \$19,500

**27' VEGA '73**, Volvo 10 hp dsl, VHF, d/f, 4 sails \$16,500

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**27' PEARSON '67 RENEGADE**, Atom 4 30 hp inbrd rebt '71, 3 sails, log, ship-to-shore \$11,500



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#### FIBERGLASS KETCH

SA-81305. 39'9"x28'7"x10'6"x3'11"/9'9". McInnis and Irwin designed, built in 1971. Center cockpit. Accommodations for up to seven including aft cabin. Excellent equipment incl. Barient winches & Hood sails. Good electronics. Pressure water. Roller furling jib. Westerbeke diesel.

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S-72989. 41'8"x31'10"x12'2"x7'1". Designed by Carter and built by Frans Maas in 1968. She was updated extensively in 1975 with new rig and sails. She is lavishly outfitted for ocean cruising and racing. Westerbeke 4-107. Sleeps 7 comfortably with aft cabin. Much equipment.



#### MCCURDY & RHODES SLOOP

S-73385. 46'5"x34'6"x11'6"x7'1". Built in 1971 of aluminum with Hood aluminum spars. Full complement of Signet and B&G electronics, Carter and Barient winches, all Hood sail inventory. Much other gear. Accommodations for eight. She is a fast ocean racing sloop with a good racing record, yet also a comfortable boat to cruise.



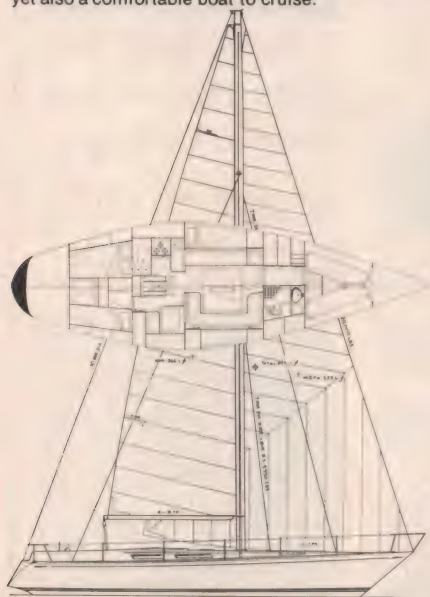
#### VALIANT 40

The new Valiant 40 is on the East Coast charming sailors with its good looks, strong construction and very comfortable cruising accommodations in two double staterooms and main cabin. Diesel. Her speed may surprise you and the amount of room 34' LWL and 12'5" beam provides. Shoal draft model also available. Immediate Sailaway delivery.



#### KEEL AUXILIARY KETCH

SA-81330. 40'4" x 30'2" x 11'5" x 5'8". Designed by William Garden and built in Japan in 1969. She is constructed of wood with bronze fastenings and teak decks. Accommodates up to six in owner's party with one enclosed head. Hood sails. She is a well fitted out one owner yacht in the water and available immediately to sail.



#### NEW SWAN 431

43'5"x33'4"x13'5"x7'3". Newest S&S design built by Nautor. Comfortable, strong, seaworthy offshore racing sloop with excellent cruising accommodations. Features double stateroom aft, 4 berths in main and 2 forward. Hand-rubbed teak interior, teak decks, shower. Diesel engine.



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S-80520. 42'7"x29'6"x11'9"x4'2". This lovely yacht was built of mahogany and cedar, double planked, over oak frames in 1958. Exterior and interior trim is teak as are the decks. Pleasant cruising for six with a galley capable of stores for extensive passages. 37 HP Mercedes Benz diesel. Fully equipped.

#### CHARTERS

We have extensive listings of yachts available in all sizes and types — power and sail. Situated in Maine, coastal New England, Scandinavia, Aegean, Mediterranean, Florida, Bahamas, West Indies, and other far away places. Please call Sparkman & Stephens, Inc. for charters as soon as possible.



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**1960 Gloucester Schooner.** Steel. 36 HP dsl. Sleeps 9 in 3 staterooms. Guaranteed to survey. Try \$33,000.



**75' Racing/Cruising Ketch.** Alum. hull. 1966. A superbly gracious sailing yacht. Sleeps 8 in owner's party in comfort plus 3 in crew. Lovely interior, large galley. Asking \$225,000.



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**67' Gaff Rigged Schooner.** 1970. Dsl. Built in Newfoundland. 6.5 KW gen. A rugged character vessel at far below replacement. \$67,500.

**76' Fiberglass Ketch.** 1965. 6-71 diesel 8 KW gen. Can sleep 12 in 4 dbl plus 2 in main cabin and 2 in crew. Large, comfortable cruising ketch. Ideal for extended voyaging or charter work. Fully equipped, well maintained and ready to go. \$235,000.

**70' 1912 Diesel Yawl.** Wood by Sheppard. Recently made Atlantic crossing. \$70,000.



**DEALERS FOR PRIVATEER AND KITTIWAKE**  
26' sailing yacht, Gillmer designed. Grace and speed. Ketch or cutter. Diesel standard. Full headroom. Sailaway \$15,500.



**New, Beautiful, Steel.** English built, rugged quality construction. Optional custom layouts. Excellent sailing qualities. Designed by Peter Ibold. Sailaway from \$115,000. Custom builders in steel or aluminum to 80'.



**45' S&S Center Cockpit Ketch.** Built 1947 by Palmer Johnson. 4x winner—Chicago Mackinac. Grand old dame fully eqpt for world cruising. Sleeps 8. 11 sails. Westerbeke 4-107. New spars. Documented. \$44,500.



**49' Hinckley Motorsailer Ketch.** 1973. Ford diesel. 10 KW gen. Electric Barents and furling headsail. Beautifully bilt to highest standards and quality. Air, complete equipment list incl. radar, autopilot and much more. \$195,000.

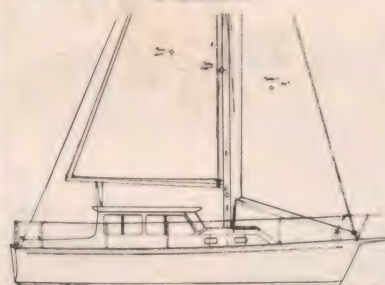


**62' Auxiliary ketch.** 1973. Beautiful teak construction. 1973. Luxurious, spacious accommodations for 7 in owner's party plus crew. Full electronics, 2 cockpits. A perfect sailing yacht for extended cruising. \$325,000.

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**44' Nova Scotia ketch.** 1949. Mahogany and cedar construct. w/teak decks. Westerbeke dsl 4-107. Recently refurbished. Acc. 6 with ease. Recently surveyed. \$35,500.



**35' Auxiliary steel sloop.** 1964. A marvelous blend of solid dutch workmanship and Alan Buchanan design. Just out of the yard after complete refurbishing. \$30,000.

**Fisher Island Aft Cabin Ketch.** 1963. Meticulously outfitted for extended cruising. Rugged teak construction. Dual steering. Sleeps 6 in 2 double staterooms and deckhouse. Registered and documented. Finest yacht quality. \$62,500

**36' Allied Princess Ketch.** 1975 Westerbeke diesel. A brand new yacht delivered in 12/75. Shaw sails. Streamstay head stay. Step into a complete yacht at \$57,000.

**35' Fiberglass Coronado Sloop.** 1971. Westerbeke 4-91 diesel (300 hrs). Accommodates 6 in 2 dbl. strms & salon. Head with shower. Well equipped galley. 3.5 Kohler, VHF, depthfinder, Sumlog, stereo and more. Recently painted with Awl grip. Asking \$39,000.

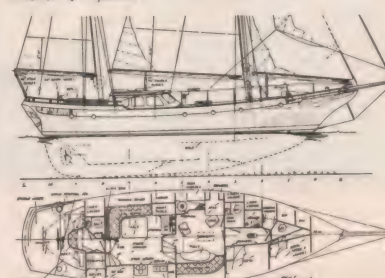
**34' Hinckley Southwester Keel Sloop.** S&S designed. Volvo diesel. Good sail inventory. Sleeps 4. A classic Hinckley in sound condition. Well maintained. \$25,000.

**33' Morgan Out Island Sloop.** 1973. Westerbeke 4-107. FG. Alum. spars, dacron sails. Teak trimmed. Fully found sloop with extensive equipment inv, wheel steering, auto pilot, full electronics and cruising gear. A/C. \$42,500.

**28' Auxiliary Sloop.** German built and designed in 1959 to master North Sea weather. Universal Atomic 4 rebuilt in 1975. Sleeps 4. \$14,500.

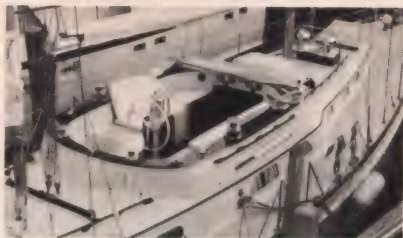
**38' Bakker Ketch Rigged Motorsailer.** Steel with diesel and gen. Aft cabin with center cockpit. Well eqpt. Recently refurbished and in good condition. Asking \$39,000.

**37' Fiberglass Sloop.** 1974. Farymann diesel with complete instrumentation. Well rigged for extensive cruising in comfort. Mechanical refig, self-tending boom, pressure water and more. \$44,500.



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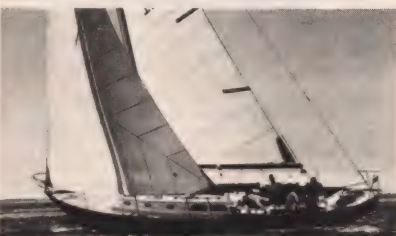




**1973 HINCKLEY 49.** White hull, Lehman-Ford 120 h. p. diesel engine, 12.5 KW Westerbeke generator, 2900 radar, SSB radio, Hood sails. Professionally maintained. Perfect condition.



**1971 BERMUDA 40 MK III.** Custom birch interior, h&c press, water w/shower, air conditioning and Westerbeke 35 hp. Full Hood sail inventory. Full summer charter income.



**1969 HINCKLEY 41 COMPETITION.** Westerbeke diesel; birch interior; full race sails by Hood; RVG wind vane; Loran & electronics; \$80,000.

# HINCKLEY

YACHT BROKERAGE INC.

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**Bob Hinckley • Sam Johnson**



**1964 PILOT 35 SLOOP.** Westerbeke 30 h. p. diesel, 4 berths, Speedometer, Fathometer, Radiotelephone, Tiller steering, Hood sails. Interior refinished. Maintained by Henry R. Hinckley & Co. \$38,500. (sistership)



**1970 COLUMBIA 50.** Westerbeke 4-107, auto pilot, 2 VHF radios, sleeps 8 in great comfort, sails by Hard, location S.W. Harbor.



**1965 HINCKLEY 41.** Electronics include Loran; fathometer; wind insts.; VHF; R.D.F.; Westerbeke diesel; auto pilot; complete w/spin. Asking \$55,000. (Sistership)



**1972 BERMUDA 40 MK III.** Captain maintained, Westerbeke 4-107, 6 berth, w/birch and mahogany interior. Press. h&c water, L.P. gas, elec. refrig. w/deep freeze. Barient & Hood. Complete electronics. (Sistership)

## SELECTED BROKERAGE LIST

**1961 BERMUDA 40 CUSTOM YAWL.** Black hull, New Westerbeke diesel, 6 berths, AM radiotelephone, Wind instruments, Twin speedometers. Fiberglass dinghy, Hood sails w/roller furling genoa. \$50,000.

**1968 HINCKLEY 48 YAWL.** Lt. Blue hull, Westerbeke diesel, Wind instruments, Auto pilot, Speedometer, Radiotelephone, Direction finder, Loran, Microwave oven, Air conditioning, 3-burner gas stove w/oven, Air conditioning, Full sail inventory.

**1972 SWAN 48 SLOOP.** Volvo 75 h. p. diesel, Teak deck, 8 berths, 2 heads w/showers, Loran, RDF, Full said inventory.

**1973 HINCKLEY 49 KETCH.** Lt. blue hull, Lehman-Ford diesel, Varnished mahogany interior, Radar, Loran, VHF, Many extras, Hard sails.



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DRAFT: board up	4'3"
board down	8'9"
SAIL AREA	776 sq. ft.
DISPLACEMENT	20,000 lbs.
WEIGHT OF LEAD KEEL	6,500 lbs.
WATER CAPACITY	110 gals.
FUEL CAPACITY	48 gals.
BRIDGE CLEARANCE (at main truck)	53'6"

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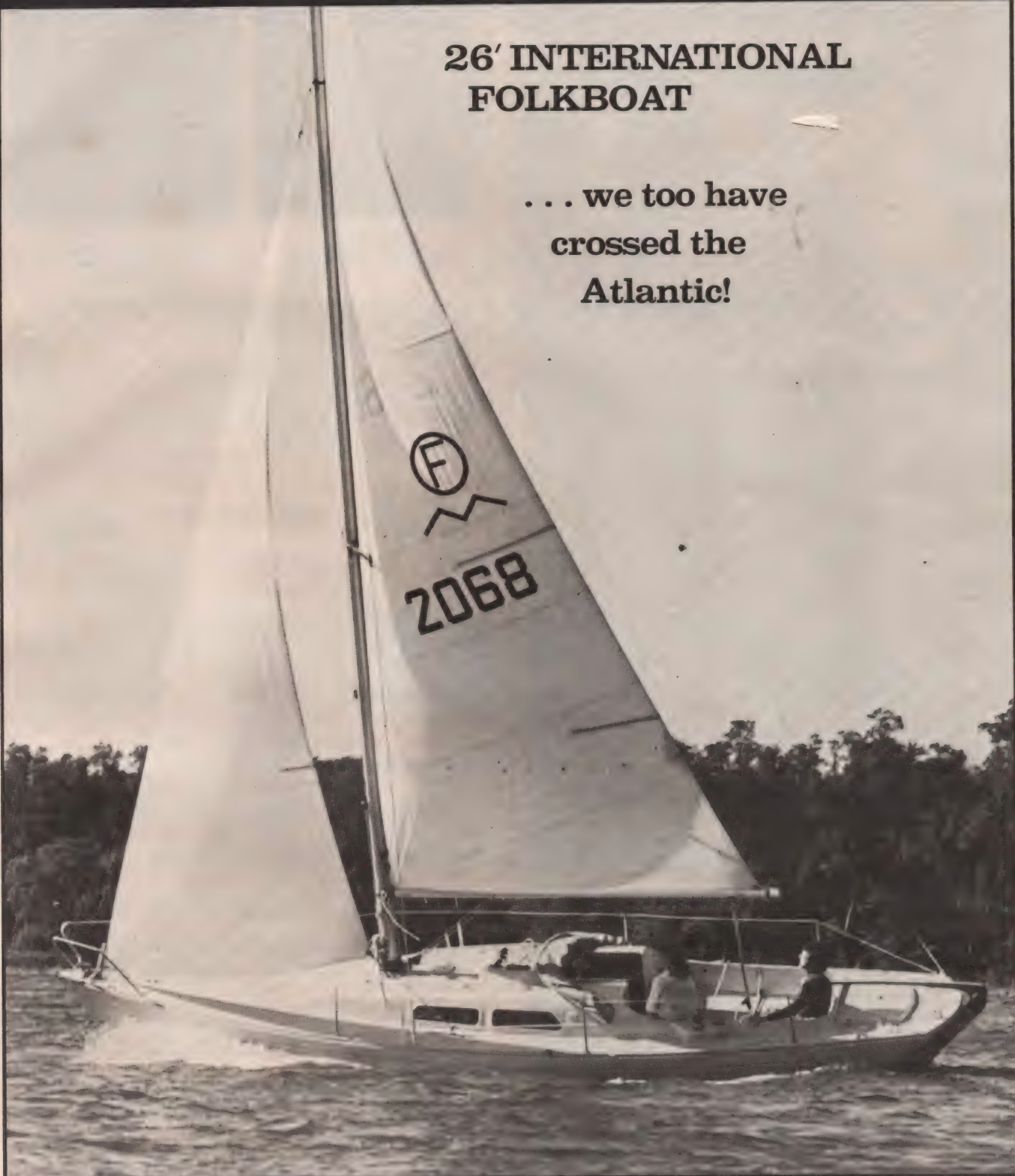




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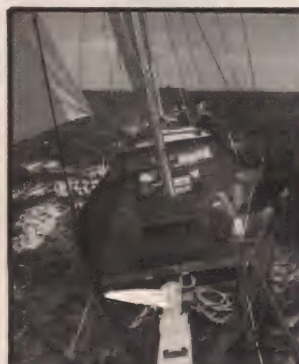
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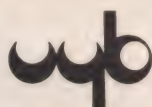
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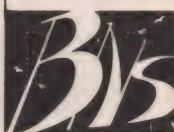
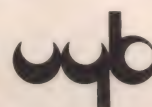
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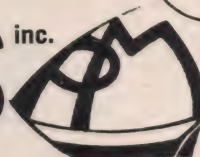
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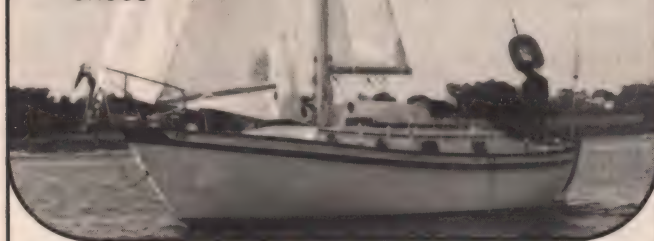




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'72 Bristol 26, OB, sails, extras	11,500
'74 Bristol 27, IB, 3 sails, extras	13,900
'73 Ericson 27, 3 sails, OB, many extras	15,500
'75 Bristol 28, IB, like new with extras	19,900
'68 Islander 29, IB, 4 sails, very clean	15,500
'73 Ranger 29, 4 sails, many extras	22,000
'75 Bristol 30, K/C, wheel, like new	21,000
'68 Golden Hind, diesel, 7 sails, loaded extras	18,500
'41 Crocker 30', Atomic 4, 4 sails, excellent condition	7,900
'66 Columbia 31, 4 sails, IB with extras	18,000
'74 Bristol 32, K/C, diesel, wheel, many, many extras	27,500
'72 Bristol 34, diesel, 4 sails, extras	28,500
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### SELECTED BROKERAGE YACHTS

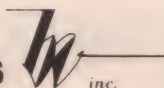
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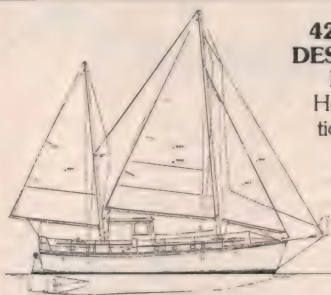
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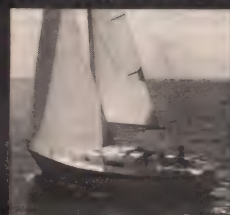
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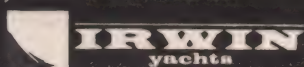
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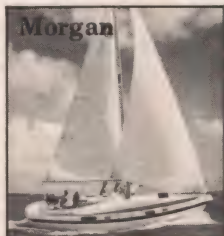
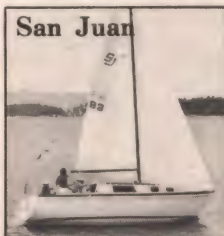
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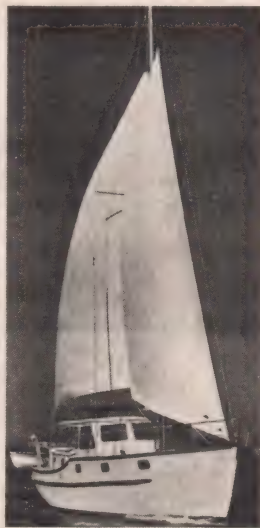
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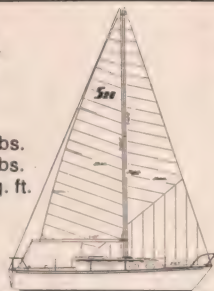
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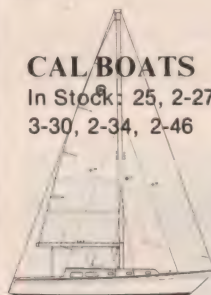
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They should be. Because as owners of Tortola Yacht Charters, they've not only reserved ten new boats, they also worked with Charley in planning the new design. Wally offering his knowledge as past president of both Hard Sails and Seaboard Marine (and as recent author of "Sail Power" published by Alfred Knopf) and Ed his expertise gained from managing successful charter operations in the British Virgin Islands.

In fact, it's Wally & Ed's knowledge about sailboats and chartering that's made them so excited. They believe Charley's new 38 is just about the perfect combination of racing and cruising characteristics. She's got the best attributes of a racing hull shape but the room of a 40 - 44 footer below, including 7 bunks, a 9 person dinette, private staterooms, and much more.



Wally

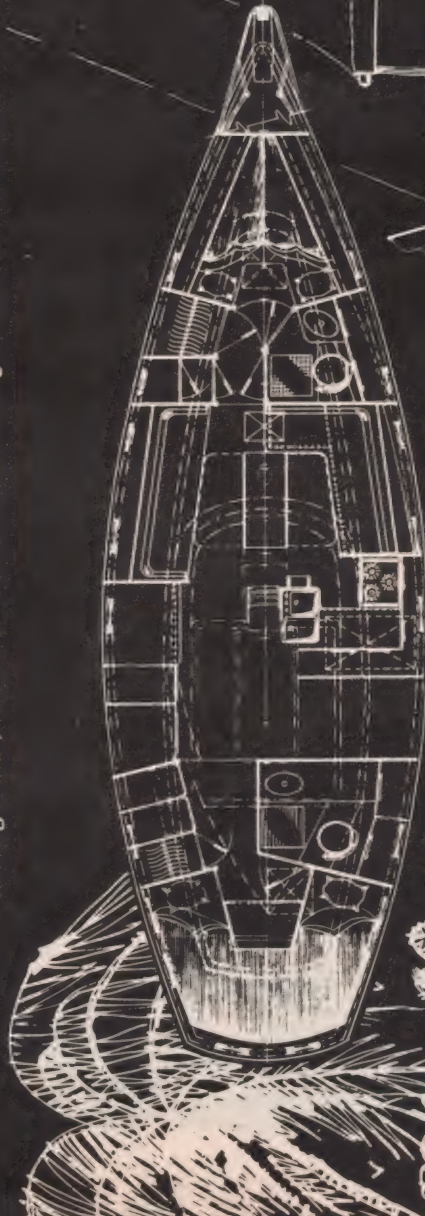


Ed

The boat, of course, will be sold throughout the U.S. by Heritage. But Tortola Yacht Charters is offering a special Caribbean model for charter this winter in the British Virgin Islands. So if you've ever thought about owning a sailboat in the Caribbean, Tortola Yacht has a great way to help you realize your dream. And if you've ever thought about cruising the world's most beautiful waters, we'll help you plan your cruise. We think you'll become as excited as we are.

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## COURSE OUTLINE

### Saturday

1200

Arrival and store baggage on Capri 30 assigned to you.

1230

Classroom orientation.

1. Review of 6-day course of instruction to come and what is expected.
2. Basics of how to sail a boat.
3. Basics of anchoring.
4. Instructions on tying a bowline, half hitch, clove hitch and square knot.

1400

Check-out on the Capri 30.

1. Use of the head.
2. Use of the stove.
3. How to start and operate the auxiliary diesel.
4. Running rigging identification.
5. Use of the batteries.
6. Food storage.
7. General instructions on use of the equipment on the boat.
8. Use of the outboard engine and dinghy.

1530

Demonstration with students, aboard Capri 30.

1. Motoring to the nights anchorage in the harbour.
2. Demonstration of anchoring and up-anchor.
3. Demonstration sail with instructor in harbour—to windward reaching, downwind, jibbing, furling sails, coming up to anchorage under sail—review with students—return to dock.

1700

Students aboard their Capri 30 and under the eye of the instructor, drop dock lines and motor out to night's anchorage in harbour. Stow gear—freshen up.

1800

Crew of each boat returns to dock and CSY's beach bar for cocktail party with instructors. CSY Sail 'N Learn movie is shown to students.

1900

Students return to their respective yachts—cook evening meal aboard and to bed.

### Sunday

0800

Students prepare breakfast aboard—make yacht ship shape.

0900

Students meet in CSY classroom.

1. General orientation on charts of the Hope Town to Whale Cay area, the portion of the Abaco Cays where the course is to take place.
2. Introduction to plotting a course.
3. More basic sailing instruction.
4. Use of the radiotelephone.

1100

In CSY workshop.

1. The anatomy of a diesel engine.
2. The anatomy of an outboard.

1200

Return by dinghy to individual Capri 30's for lunch aboard.

1300-1700

Instruction in chase boat—students up anchor and set sail on compass course toward Man 'O War Cay. Half-way over, each yacht is put around a triangular course marked by buoys by instructors in chase boat. Instruction on windward, reaching, down wind, jibbing, talking to be carried out between students and instructor by walkie-talkie. Each in party on each boat to take turns being crew and skipper. At least four turns around the course for each yacht and crew. Then on to Man 'O War Cay—luff up, furl sails and motor into American Harbour on Man 'O War Cay to anchor for the night. A review and critique of the days activities with instructor and students ends the day. Instructor leaves students for the night.

### Monday

Until 1200

Students are free to explore Man 'O War Cay—go swimming, snorkeling, free time. After all, this is a vacation, too. Lunch must be early, ready for instruction at noon when the instructor will be ready at the blackboard. Bring your sandwiches if you wish. Two hours at the blackboard will basically cover safety on a yacht. The general subject is safety.

1200

1. Weather—how to recognize coming changes.
2. Emergency reduction of sail and when indicated—taking a reef.
3. Instructions on how to carry out a man-overboard exercise.
4. Demonstration of use of flares, fire extinguishers, life preservers.
5. Safety precautions in use of the propane stove and the alcohol stove with demonstration.
6. Precautions to be observed in the use of gasoline engines—taking on fuel.
7. How to rig a bosun's chair and a demonstration of its use.
8. Emergency sail repairs.
9. Precautions to prevent accidents in handling of lines and winches.
10. More navigation and plotting of courses.
11. Use of the hand bearing compass.

1400-1700

Up anchor—motor out of the harbour, set sails. Then crew on each yacht goes through a real man overboard exercise one at a time with one of the crew with a life preserver jumping overboard and the rest of the crew recovering him. This, as always, under the eye of the instructor in the chase boat with walkie talkie and bullhorn. More practice around the triangular course. Exercise completed, then sail to Fish Cays on previously plotted course and to Scotland Cay using hand bearing compasses to take bearings to ascertain speed. Anchorage for the night at Scotland Cay. Review and critique with the instructor before he leaves for the night.

### Tuesday

To 1000

Free time swimming, snorkeling, exploring, beach combing or practice sailing if instructor has allowed it.

1000-1200

Blackboard instruction with instructor. Today's subject comes under the overall heading of boat maintenance.

1. Explanation of how head works—demonstration of taking head pump apart, how to unclog it, location of gate valves.
2. Bilges—why water in bilges—how to adjust stuffing box. Demonstration of fixing hand and electric bilge pumps.
3. Electrical system—how it works, how to maintain batteries—use of hydrometer.
4. Diesel Engine—its operation, changing impeller in water pump, changing oil, transmission maintenance, curing air lock, tightening fan belt. In preparation for this afternoon's exercise, the significance of water color in navigation in the Bahamas is explained. How to tell nature of bottom, water depth. Also instruction on coming up to a mooring.

1200-1430

Back to boats and up sails for sail in Hope Town Harbour—this is to be an eyeball navigation exercise to use water color to guide your way—spot channels—recognize grass—rocks on the bottom. Course to be between Man 'O War Cay and Sandy Cay around bank north of Elbow Cay and into Hope Town Harbour and to come up to a mooring for the night. Usual critique between students and instructor before he leaves them for the night. The rest of the afternoon at leisure.

### Wednesday

1000-1200

(Time depending on tide.) This blackboard session will be devoted to what to do when you go aground—kidding off—how to take a line to be towed off—the use or non-use of the auxiliary engine—how sails can help. Use of the tide tables and their use in questionable areas—a discussion of different kinds of anchors and their use is indicated—the use of the emergency anchor and a completion of the course on anchoring—the Bahamian Moor and stern anchoring.

1200-1300

Lunch aboard.

1300-1700

Up anchor and motor out of Hope Town Harbour. The first hour or two (tide permitting) will be to run the boats hard aground and each crew will go through the lesson of the morning in getting off. This will be under the supervision of the instructor in the chase boat. The instructor will return to Marsh Harbour and leave the class on their own to sail to Guana Harbour where they will anchor for the night. The instructor will continue to be in radio communication to help with problems if need be.

### Thursday

Until 1200

The students have the morning free to swim, explore, do their own thing, but they are to up anchor and be at Bakers Bay off the beach at the northern end of Great Guana Cay by noon. Bring dinghys and lunch in to meet instructor on the beach for the blackboard session for the day.

1200-1400

This is loose ends day. Students will have been asked to write down those areas in the course that they feel weak in so the instructor can fill them in. The trail of the talk will be dictated by the students' needs. The instructor will then review the entire course.

1400-1600

The students will now race each other to a point outside of Treasure Cay harbour where the instructor will be in his boat at the finish line. The first to cross gets a bottle of champagne. Sails are lowered and the student yachts motor into a mooring at Treasure Cay. Instructor leaves.

### Friday

1000-1200

Instructor is at the dock. Students will now be free until Sunday noon when their charter course ends to cruise the Abacos on their own. The instructor based on his evaluation of the ability of each boat will set the cruising area limits. There will then be a general orientation and chart check-out for the rest of the cruising area which the students may want to visit.

1200 Friday to 1200 on Sunday

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1200 Sunday

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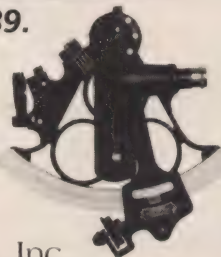
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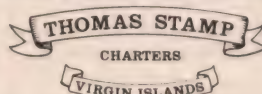
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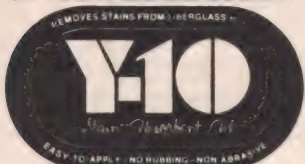


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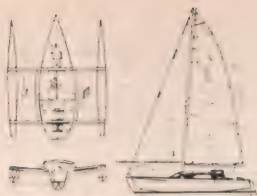
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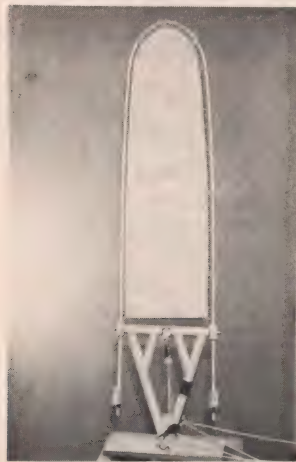


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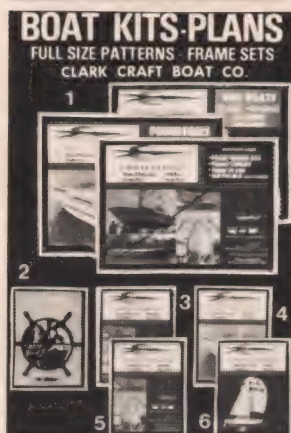
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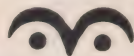


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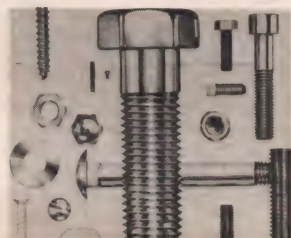
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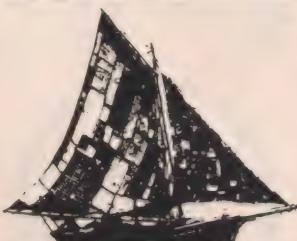
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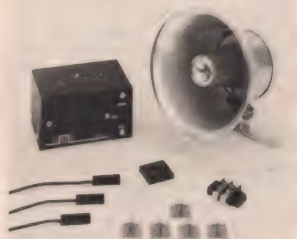
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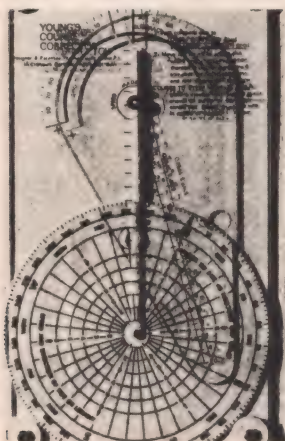
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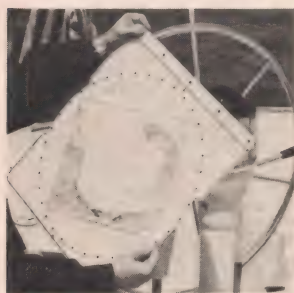
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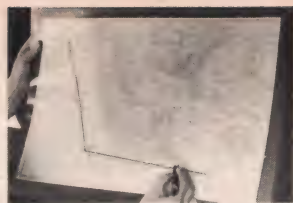
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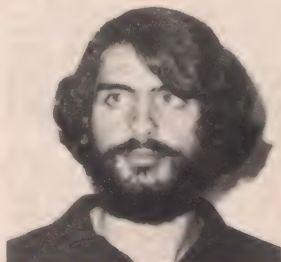
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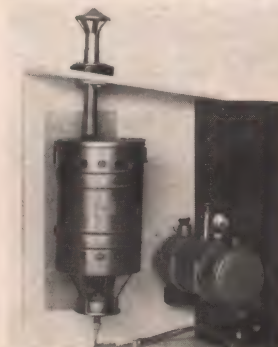
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Meanwhile, after 1984, the Coast Guard continued to publish its "Boat Survey" and to carry out its survey of boats and boaters. The survey was the first of its kind, and the results were startling. The Coast Guard estimated that there were 100,000 boats in use in the United States, and that there were 100,000 boats in use in the United States.

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The figure shows a view of the instrument as it might appear on a boat. The instrument is a sextant, and it is used for measuring the altitude of the sun or stars above the horizon. The instrument is mounted on a tripod, and it has a telescope at the top. The telescope is used to look at the sun or stars, and the altitude is measured by the angle between the horizon and the line of sight.

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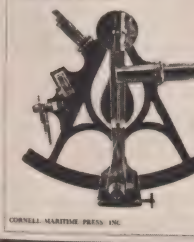
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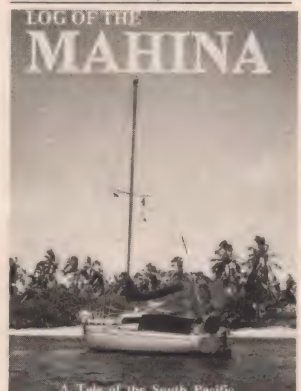
## THE MYTHS & THE TRUTH ABOUT SELECTING A MARINE SEXTANT

By CAPTAIN ROEL M. JACOBS  
With an Introduction by Mr. Mark B. H. H. H.  
Foreword: U.S. Coast Guard (H.C.)



**A PROFESSIONAL GUIDE TO** selecting a marine sextant including standards of performance and helpful hints for the yachtsman, 56 pages. \$4.00 includes first class postage and handling. Order from NAUTECH, Dept S2, 445 N. Sacramento Blvd., Chicago, IL 60612.

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**MALE, 21, B.S. Physics,** seeks crew position on yacht bound anywhere for any length of time. 3 years small boat sailing experience, scuba. Works hard, learns fast. Richard Austin, 155 Hargraves Dr., Portsmouth, RI 02871.

**CREW POSITION DESIRED** after Aug. on blue-water sailboat. Male, professional boat-builder. Small sailing craft experience. Speaks Spanish & Russian. Marc Nadeau 4546-27 NW 13 St., Gainesville, FL 32605. (904) 376-5887.

**ABLE SAILOR,** female, 24, desires crew position anywhere after Sept. J. Wino, 19713 Evergreen, Detroit, MI 48219.

**SKIPPER AND YACHT** looking for beautiful girl to cruise the world. Juergen, 35 Greenwood Cove, Tiburon, CA.

**EXPERIENCED MACHINE** Operators (Dacron & Nylon) for sailmaking. Experience necessary. Florida area. Reply Box 157, c/o SAIL, 38 Commercial Wharf, Boston, MA 02110.

**COLLEGE JUNIOR,** male, desires crew position aboard cruising boat starting Sept. Cruising experience. Reply Box 158, c/o SAIL, 38 Commercial Wharf, Boston, MA 02110.



**ACCOUNTANT**, 26, UNC Graduate, will receive CPA certificate in December, desires position in sailboat industry or related field starting 1-1-77. Will relocate. Reply Box 161, c/o SAIL, 38 Commercial Wharf, Boston, MA 02110.

**LICENSED SKIPPER** seeking position on large sail aux. or power yacht. Extensive experience on East Coast, Gulf and Caribbean. Radar, Ioran and celestial. Age 45. Available Aug. 15. Reply Box 163, c/o SAIL, 38 Commercial Wharf, Boston, MA 02110.

**HAVE BOAT-WILL TRAVEL.** Skipper, 45, sails S.F. Bay, Delta and lakes. Interested in pretty lady for weekend sailing. Reply Box 162, c/o SAIL, 38 Commercial Wharf, Boston, MA 02110.

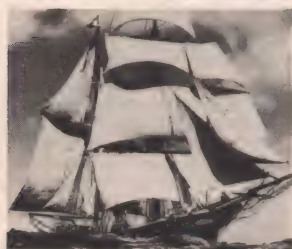
**TWO MEN** have stable 35' sailboat-looking for third person to complete crew for two to three year global voyage. B. Pearson, 39 Ticehurst La., Marblehead, MA.

**MALE**, prep school student, seeks summer position as crew and/or boatsitter and/or child sitter. Certified diver. Tutor. Counselor. Cook, errands, maintenance, boating, swimming. Contact: Duncan McNeill. Business: (212) 759-8808. Home: (212) 734-8269.

**MALE**, 20, seeks crew position starting Sept. 10 years sailing experience. All offers appreciated. Write: Larry Golding, 132 Arlington, Brookline, MA.

**YOUNG MARRIED COUPLE** wanted as crew aboard 59' ketch for cruise to Bahamas, Oct. 1976 to May 1977. Must be congenial, flexible, experienced. Good salary. PO Box 13, Bristol, RI 02809.

**STUDENT**, 22, Seeking crew position for one year or longer sabbatical. Seamanship, coastal and some celestial navigation experience. Eager and hard working. Ken Levy, 8116 Fontana, Prairie Village, Kansas 66208.



**ORIENT, INDIAN OCEAN ISLES**, Africa, Amazon. One berth available dedicated sailor, share work, costs of continuing world sailing adventure. Airmail resume: Brigantine Romance, Box 5086, St. Thomas, V.I. 00801. Also cook position open. Join now!

**EX. NAVY MACHINIST MATE**, 25, Marine Engineer, desires position on cruising vessel, avail. immed. for indef. period. Send for resume. Ed Beckett, 8608 Bunnell Dr., Potomac, MD 20854.

**MALE**, 23, seeks crew position on sailboat cruising Bahamas. Knowledge of small boats, photography. Hard working. Excellent diver. Peter Lipsick, 14050 NE 6th Ave. #106, N. Miami, FL 33161.

**36 ft. SAILBOAT READY TO SAIL** to San Blas Islands and points west. Seeking adventurous female who can share expenses. "Sail", PO Box 1013, Jensen Beach, FL 33457.

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**WANTED: 45-50' CUTTER**, sloop, ketch to lease for three years. Will return in condition received, pay all upkeep, insurance, etc. Must be ready for Caribbean cruising, well appointed, properly equipped. East or West coast boat. Responsible party. 22 Beach Rd., Belvedere, CA 94920.

**40' plus BOAT WANTED** for lease on profit share charter. Sherrod, Milford, PA 18337.

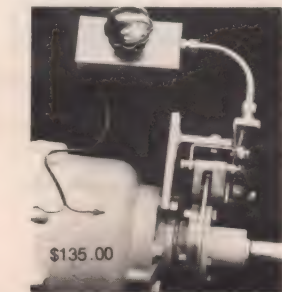
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**35-60' BOATS**, lease or share Caribbean charter profit. 100% tax advantage. Winter only. (717) 296-6679.

## BOAT GEAR

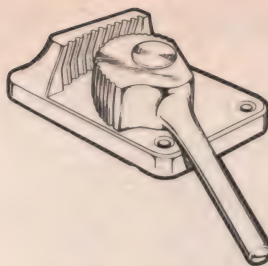


**HUNG UP** on where to carry your dinghy motor while underway? Hang it on a **HANG ONE**, two piece all teak bracket mounted in seconds at point where 1" diameter stern pulpit and stanchion are welded. Outboard, clamped to bracket, is ready for use and hazards of carrying it below are eliminated. 5 1/2" wide for motors to 3hp \$14.95. 6 1/2" wide for motors to 6hp \$15.95. Ppd. Calif. residents add 6% sales tax. Immediate delivery. Refund if not satisfied. **HANG ONE, Ltd.**, Box 9702, Dept S, Marina del Rey, CA 90291. US Patent 3,943,585.



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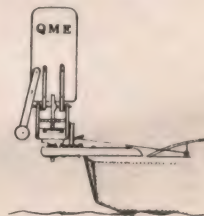


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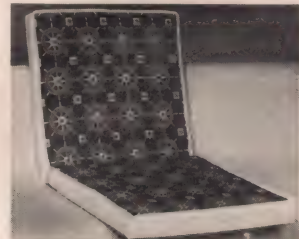
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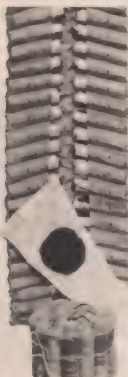
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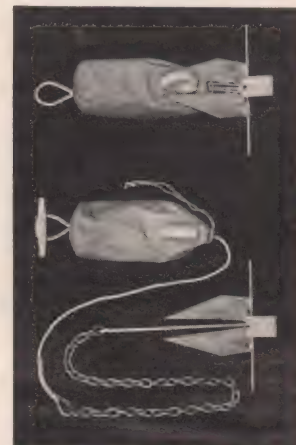


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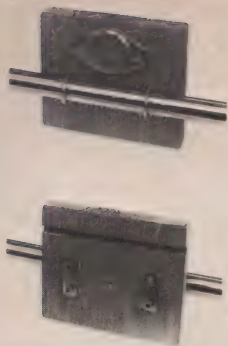
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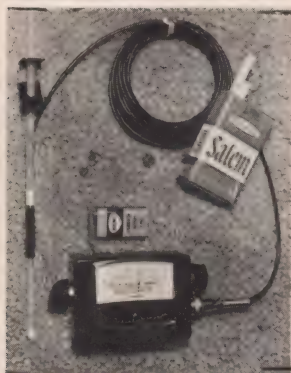


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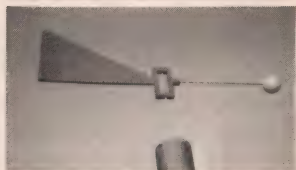
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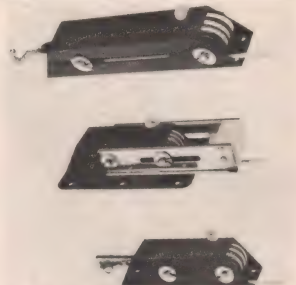
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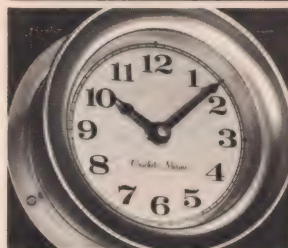


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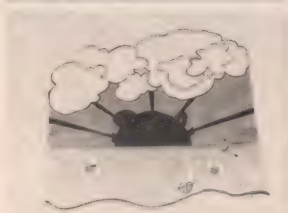
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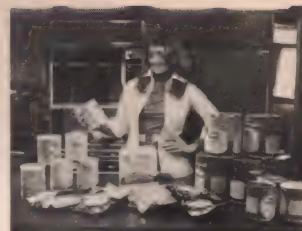


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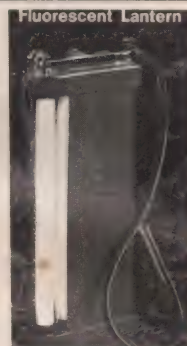
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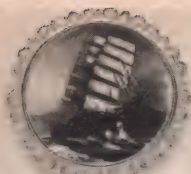
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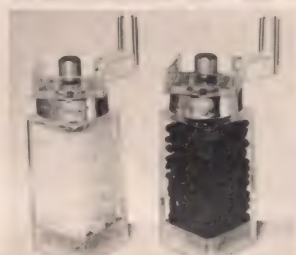
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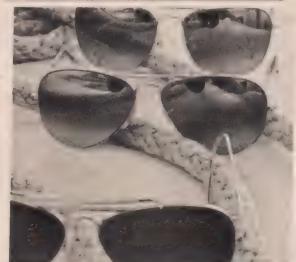
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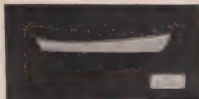


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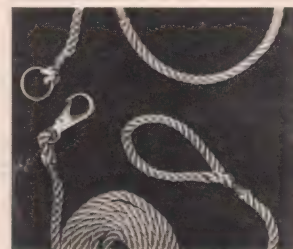
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Dreadnaught.....	146	Nautech Maritime Corp.....	137
Durbeck's.....	147	Gaagher Advertising.....	
E & B Marine Supply Inc.....	149	Newport International.....	16A,
Mercator Associates.....		Sailboat Show.....	16B, 17
Edson Corp.....	43	Nicro Fico.....	117, 119
The Williams Co.....		Baker & Sharp Advertising.....	
Endeavour Yacht Corp.....	44	Northrop & Johnson.....	194
Advantage Advertising.....		NorStar Fiberglass Yachts.....	136
Enkes.....	124	North Star Yachts Ltd.....	35
SB&W Associates.....		Norwood Marine Inc.....	168
Ericson Yachts.....	2	Ocean Research & Education.....	
The Greer Agency.....		Society Inc.....	114
Fales Yachts.....	30	Offshore Sailing School.....	176
Buzzard Inc.....		Chester E. Okuniewicz.....	131
Famet Marine.....	116	Ontario Yachts.....	32
Fleet Indigo.....	177	Penobscot Boat Works.....	115
Recreational Communications.....		Performance Sailcraft.....	54
Flying Scot Sailing Association.....	48	Hans Loffer Design.....	
Jones Advertising Agency Inc.....		Pilot Marine.....	171
Fuji Yacht Builders.....	57	Pisces Diesel Marine Engines.....	14
Sarbacker Co.....		Porsche Audi.....	15
Arnold C. Gay Yacht Yard Inc.....	164	Doyle Dane Bernbach Inc.....	
Genco Sails Ltd.....	146	Proctor Masts USA Inc.....	137
Gibb Yachting Equipment Co.....	149	Race Lite South Coast.....	148
Import Press Advertising.....		Raritan Engineering Co.....	13
Glen L. Marine.....	145	Wyble Advertising.....	
Recreation Media Advertising.....		Bruce Roberts International.....	140
Goldbergs Marine.....	144	Specialty Marketing & Investment.....	
Richard Goldberg Associates.....		Sabine Art Collection.....	151
Grand Lagoon Marina.....	172	Phillips Typing Inc.....	
Grebe Yacht Sales Inc.....	171	Sabre Yachts.....	8
Grunert Co.....	123	Sailboats Northeast.....	166
The Keith Agency.....		Sail Books Inc.....	47, 112, 142
Gulfstar Inc.....	1	Sail Craft Ltd.....	135
Manier Advertising.....		Peter Roberts & Jones Ltd.....	
Jay Stuart Hall.....	149	Sail Craft of Bay Head.....	172
Bayside Advertising.....		Sailing Associates Inc.....	170
Peter Haines Yacht Sales.....	169	Sailing Supply Co.....	145
Harbor Island Sailing Academy.....	177	Sailors Haven Inc.....	167
Hartge Yacht Sales Inc.....	164	Sailrite Kits.....	148
Havencraft.....	166	Ocean Advertising.....	
Heritage Yachts.....	31	Samson Marine Design Ltd.....	64
Heublein Jose Cuervo Gold.....	11	Insight Advertising & Public Relations.....	
F. William Free & Co. Inc.....		Schaefer Marine.....	136
Heublein Club Cocktails.....	65	Gardner Associates.....	
The Marschalk Co. Inc.....		Paul Schreck & Co.....	50
Hild Sails Inc.....	27	Schrimshaw Yacht Agency.....	171
Baynard Advertising.....		Schucker Yacht Corp.....	118
Henry R. Hinckley & Co.....	42	Seagull Marine.....	113, 117, 128, 149
Oransky-Elliott Advertising Inc.....		Sea Star Marine Supply.....	147
Hinckley Yacht Brokerage Inc.....	160	Sebago Inc.....	63
Hinkel Marine.....	170	Art Mart.....	
Hollandia Yachts Inc.....	169	Shipmate Stove.....	145
Hullmaster Boats Ltd.....	116	Ship's Lore Ltd.....	115
McAdoo Inc.....		I&I Advertising.....	
Ideal Windlass Co.....	144	Ship's Store.....	148
Potter Hazlehurst Inc.....		K&D Advertising.....	
Imtra Corp.....	113, 119, 128	Signet Scientific.....	62
Inland Marine.....	113, 119, 128	Libron Salesbury Inc.....	
Inter Maritime Agency Inc.....	174	Sir Gal Footwear.....	132
International Marine Instruments.....	123	Solomons Island Yacht Sales.....	176
Gardner Associates.....		Sound Spars Inc.....	146
International Yacht Brokerage Inc.....	156	Sparkman & Stephens.....	158
Simmonds & Associates.....		Spinnaker Sally.....	131
The In-The-Water Boat Shows.....	29	Super Spar.....	126
Columbia Advertising Inc.....		Stevens Yachts Inc.....	174
Irwin Yacht & Marine Corp.....	41	Parker Allen Co. Inc.....	
Acme Deluxe Advertising.....		Robert R. Stone.....	166
Irwin Yacht Sales Inc.....	162	Peter Storm Charters.....	177
Islander Yachts.....	58, 59	Symons Sailing Inc.....	171
Mission Advertising.....		Tanner Industries.....	16
Italcambio.....	49	Grand River Marketing Associates.....	
ICO Advertising Corp.....		Tartan Marine Co.....	45, 141
ITT Jabsco.....	19	Grand River Marketing Associates.....	
D'Arcy MacManus & Masius.....		Terramar Industries Ltd.....	Cover 2
Jack Kelly Yacht Sales Inc.....	170	Ed Thrall Yachts.....	161
Lancer Yachts.....	22, 23	Time, Inc. Time-Life Books.....	33
Charles Mott & Co.....		Wanderlugs Recreational & Sporting.....	
Layton Industries.....	129	Tortola Yacht Charters.....	173
O'Neil Marketing Services Inc.....		Travaco Labs.....	130
Le Fiell Marine Products.....	40	Tulman Advertising Agency.....	
Public Communications West.....		Turner Marine Yacht Sales.....	167
Lippincott Sailing Yachts Inc.....	170	Unimetrics.....	46
Lipton Marine Industries.....	144	Beta Advertising.....	
S. Frederic Auerbach Co. Inc.....		United Yacht Brokers Inc.....	162
Luger Boat Kits.....	37	Volvo Penta.....	4
Luder Advertising Agency.....		V.P.A. Advertising.....	
Edward Macbean & Co. Ltd.....	Cover 2	West Coast Ropes.....	133
Manhattan Marine.....	127	West Indies Yachts Inc.....	174
Seared Advertising.....		Westail Corp.....	6
Marine Construction Ltd.....	51	Impact Advertising.....	
Marine Center.....	136	Whitby Boat Works Ltd.....	21
Marand Enterprises.....		D.H. Advertising.....	
Marine Trading International.....	165	Whitney Virgin Island Charters.....	176
Marine Underwriters Agency Inc.....	166	Windjammer Yachts.....	131
H. Whitney Guter Advertising Agency.....		Windsurfing International Inc.....	134
Marlow Ropes.....	113	George Parque Associates.....	
Mass Bay Yacht Sales Inc.....	169	Winslow Co.....	148
Maximum Inc.....	130	Charles W. Kennedy Co.....	
Buzzard Inc.....		Yacht Design Institute.....	149
McMichael Yacht Brokerage.....	153	Marketing Communication Inc.....	
Merriman Holbrook Inc.....	53	Yachts Ltd.....	155
Grand River Marketing.....		Yacht Specialties Co. Inc.....	129
Metalast Marine.....	135	The Greer Agency.....	
The Moorings Ltd.....	172	Yacht Yard Sales Inc.....	168
Pat Moss Inc.....	163	Zephyr Products.....	145
Murphy & Nye Sailmakers.....	38-39	The Williams Co.....	
Lucky Friday Advertising.....			
NACRA.....	127		
NAEBM-Westlawn School of Yacht Design.....	125		
Ziegler Advertising Inc.....			

## INDEX TO ADVERTISERS

Abaco Bahamas Charters Ltd.....	174	Cabotcraft Industries Ltd.....	28
Aerofast Inc.....	24	Calyppo Yacht Charters.....	172
Kennedy Advertising Inc.....		Canor Pirelex.....	Cover 4
Alajuela Yacht Corp.....	18	Caribbean Sailing Yachts Ltd.....	175
John G. Alden Inc.....	154	Caribbean Yacht Charters.....	176, 177
Alexander Roberts Barlow.....	55	C & C Yachts Ltd.....	9
T. J. Alexander Advertising.....		McLaughlin, Mohr Ltd.....	
Alexander Roberts Sheerline.....	134	Challenger Yacht Corp.....	52
T. J. Alexander Advertising.....		Charleston Yacht Sales.....	167
American British Marine.....	133	Chaser Yachts.....	122
American Fiberglass Corp.....	132	Draper House Ltd.....	
Palmetto Productions.....		Ciamcleats Ltd.....	144
Annapolis Sailing School.....	177	Kingscot Ltd.....	
Antilles Yachting Services.....	176	Coastal Recreation Inc.....	12
Buzzard Inc.....		Coast Navigation School.....	124
Atkins-Oxford Yacht Sales.....	161	Coast Advertising Bureau.....	
Atlantic Sailing Yachts.....	164	Columbia Yacht.....	Cover 3
Avon Inflatables.....	117, 128	Ryder & Schind Inc.....	
Banshee International Inc.....	61	Composite Technology Inc.....	10
Basil-Voges Yacht Insurers Inc.....	165	Concordia Yacht Sales.....	166
Bayfield Boat Yard Ltd.....	36	M. L. Condon.....	147
Bay Nautical Supply Co. Inc.....	162	S.E.I. Advertising.....	
Beckson Manufacturing Inc.....	130	Cruising World.....	167
Thompson Turner Inc.....		Daniel Yacht & Ship Brokerage Ltd.....	159
Richard Bertram & Co.....	163, 174	Davis Instruments Corp.....	146
Beverly Harbour Marina.....	169	Deep Water Yachts.....	161
Ber & Saunders Inc.....	163	Delaware Yachts Inc.....	165
Blue Water Marine.....	147	Dickerson Brothers.....	168
The Boat Place.....	171	Dion's Yacht Yard Inc.....	166
Bombardier Ltd.....	137	Dockrell Yachts.....	24
Spitzer Mills & Bates Ltd.....		Dockside Yacht Sales.....	165
Mack Boring & Parts Co.....	64	Dolphin Book Club.....	25, 26
Bristol Electronics.....	125	Wanderman, Ricetta & Kline Inc.....	
Caroe Marketing.....		Doughdish Inc.....	128
British Leyland Jaguar.....	7	Down East Yachts Inc.....	126
Bozell & Jacobs Advertising Inc.....		Ayer-Jorgensen MacDonald.....	
Brookes & Gatehouse Inc.....	56	Drascombe Boats Inc.....	62
Harold Michelson Agency.....		Buzzard Inc.....	



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# SAIL quote

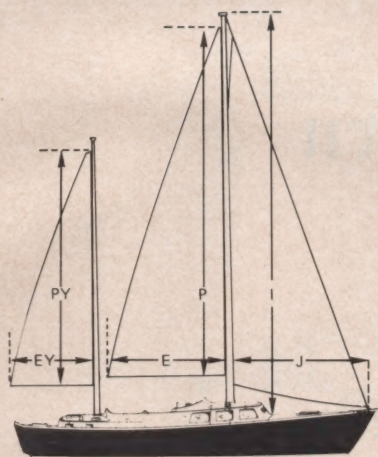
To obtain a quotation for your sails fill out the form below and mail directly to the sailmaker of your choice.

If class or stock boat fill out the information listed below.

Manufacturer of class \_\_\_\_\_

Length Overall \_\_\_\_\_

If not a production/stock boat, please give Approximate Dimensions (estimate if not known):



Foretriangle	I _____ ft.
	J _____ ft.
Main or Foremast	P _____ ft.
	E _____ ft.
Mizzen (Schooner Main)	PY _____ ft.
	EY _____ ft.

Please send me a quote on:

- |   |  |
|---|--|
| <input type="checkbox"/> a. Main (Roller Reefing) | <input type="checkbox"/> h. Reacher            |
| <input type="checkbox"/> b. Main (Reef Points)    | <input type="checkbox"/> i. Drifter            |
| <input type="checkbox"/> c. Working Jib           | <input type="checkbox"/> j. Tallboy            |
| <input type="checkbox"/> d. Storm Jib             | <input type="checkbox"/> k. Spinnaker          |
| <input type="checkbox"/> e. No. 1 Genoa . . . . % | <input type="checkbox"/> l. Reaching Spinnaker |
| <input type="checkbox"/> f. No. 2 Genoa . . . . % | <input type="checkbox"/> m. Storm Spinnaker    |
| <input type="checkbox"/> g. Roller Furling Jib    | <input type="checkbox"/> n. Other _____        |

Rig: ☐ Sloop ☐ Yawl ☐ Ketch ☐ Schooner  
☐ Marconi ☐ Gaff rig

Used for: 1. Cruising \_\_\_\_\_ % of time used  
 2. Racing \_\_\_\_\_ %  
 3. Daysailing \_\_\_\_\_ %

Sailing conditions: lake ☐ bay ☐  
 ocean or great lakes ☐

Predominant wind strength: light (0-5 knots) ☐  
 medium (5-12 knots) ☐  
 heavy (12 and above) ☐

Sails to be delivered by (date) \_\_\_\_\_

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Area Code \_\_\_\_\_ Telephone \_\_\_\_\_

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# READER SERVICE FORM

If you wish more information on any of the boats or products advertised in this issue, write the Reader Service numbers which appear below the advertisements in the boxes provided on this form. Your inquiry will be forwarded directly to the manufacturer.

After completing this form clip it out and mail to:

**SAIL Magazine, Reader Service Department**  
**126 Blaine Avenue, Marion, Ohio 43302**

Name \_\_\_\_\_ (PLEASE PRINT)

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Because this form will be processed automatically, the following questions must be answered completely. This information is designed to help the manufacturers reply more specifically to your request.

Do you own a boat? ☐ Yes ☐ No.

If yes, size \_\_\_\_\_ manufacturer of class \_\_\_\_\_

Do you plan to buy a boat within the next twelve months? ☐ Yes ☐ No.

This form is from a ☐ newsstand copy  
☐ subscription copy

JULY 1976


## Also Please send me:

- ☐ 3 years of Sail \$29.00 (Save \$16 under newsstand price)
- ☐ 2 years of Sail \$21.00 (Save \$9 under newsstand price)
- ☐ 1 year of Sail \$12.00 (Save \$3 under newsstand price)
- ☐ I'd also like a copy of the 1976 Sailboat & Equipment Directory @ \$3.50 (includes 55¢ postage and handling).
- ☐ Payment enclosed.
- ☐ Charge to:  
 Master Charge # \_\_\_\_\_

BankAmericard # \_\_\_\_\_

This form expires SEPTEMBER 30, 1976

D319

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# William Wikoff (Bill) Smith

1919-1976

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## THE NEW 8.7 "SUPERCRUISER". IT'S WHY COLUMBIA IS BECOMING THE GEM OF THE OCEAN.

A year ago we told you that Columbia and design-wizard Alan Payne were exploring a new concept in hull design. Payne was searching for a cruising hull that was supremely comfortable inside, but also super maneuverable, super stable and a number of other desirable performance characteristics.

Now, finally, after months of gruelling performance trials in Australia's rugged offshore waters, it's here.

The remarkable Columbia 8.7. A 29' cruising yacht with so many breakthrough features that Alan Payne himself (a man given to modest claims) has labeled it "Supercruiser."


It looks different, and is different. Without getting overly technical, she has a unique, easily driven hull that is stiff and exhibits qualities of safety, ease of handling, comfort and speed. She won't "hobby horse" like many cruisers. And she handles like a sports car instead of a truck.

But remember this. We are not talking about a "racing machine." This is a "cruising machine" with high-performance characteristics even in adverse conditions. Her interior is a complete knockout. The 10' beam gives her spa-

ciousness you've probably never seen in 29 ft. sailing yachts. There is 6 ft. headroom, and the five wide berths are all 6'4" or more, and the head and galley are good sized. The head even has an optional shower. And the galley has a 2-burner gimbaled range with oven and huge icebox.

There are nice details too, like a folding chart table; folding, recessed cabin table; beautiful all-teak interior; and teak exterior trim.

The 8.7 is a completely-outfitted yacht, so you won't need expensive options. She's very competitively priced also. See our new gem of the ocean at your nearest Columbia Yacht dealer. He has a complete line of Columbia cruising yachts. Or write Columbia's new plant at 2600 Yacht Drive, Chesapeake, Virginia 23320.

 **Columbia**  
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CORPORATION

For more information write No. 78 on Reader Service Form



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For more information write No. 68 on Reader Service Form.

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